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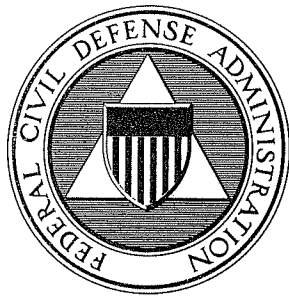
# Annual Report

FEDERAL CIVIL DEFENSE ADMINISTRATION



9-20-16 STR-755 RPL-1-1-16 1956

# Annual Report *for* Fiscal Year 1956



**FEDERAL CIVIL DEFENSE ADMINISTRATION**

UNITED STATES GOVERNMENT PRINTING OFFICE : 1957



## LETTER OF TRANSMITTAL

*The Honorable, The President of the United States.*

*The Honorable, The President of the Senate.*

*The Honorable, The Speaker of the House.*

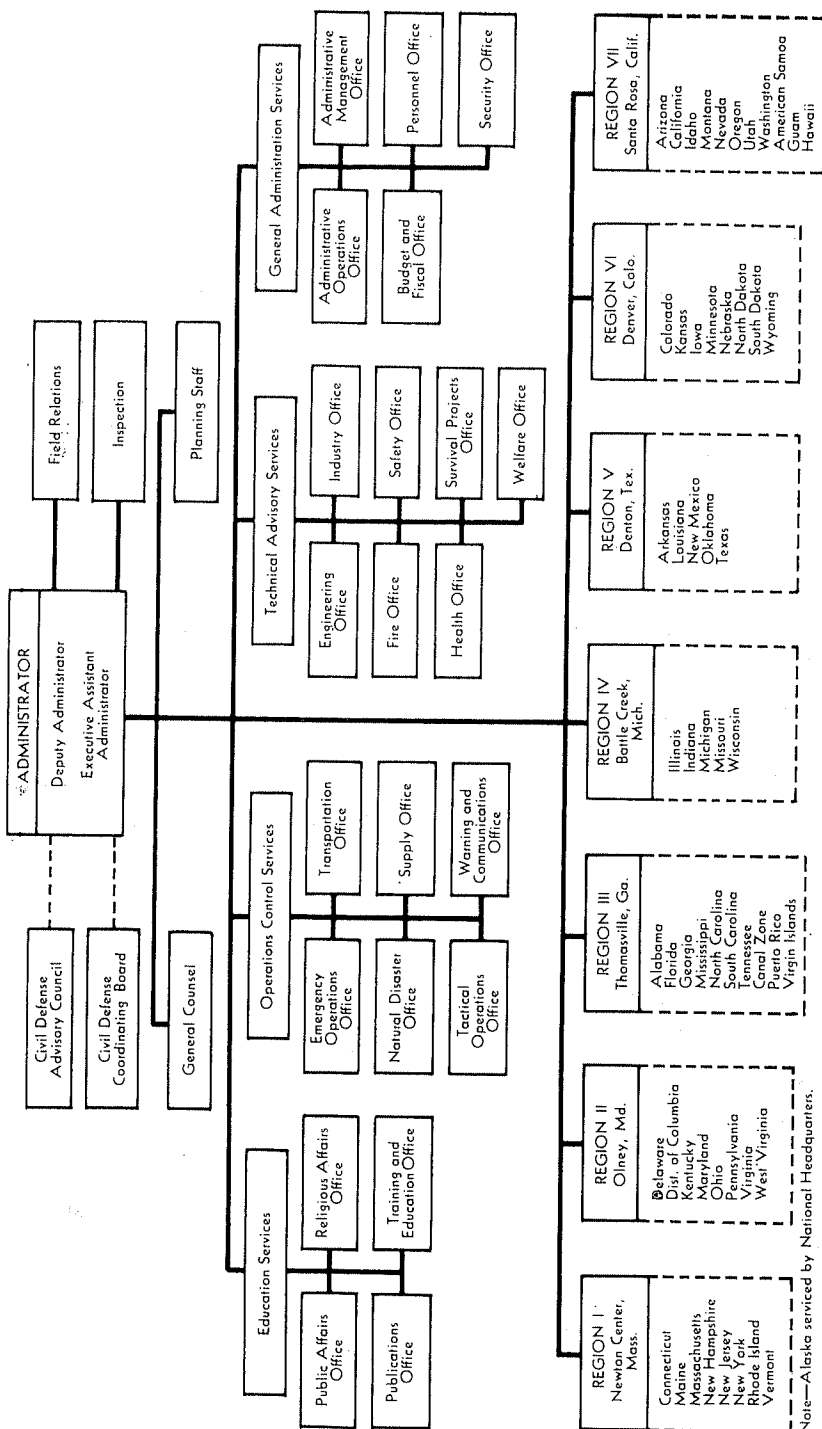
I have the honor of transmitting to you the Sixth Annual Report of the Federal Civil Defense Administration. This report is submitted in conformity with section 406, Public Law 920, of the 81st Congress.

Respectfully,

VAL PETERSON,  
*Administrator.*



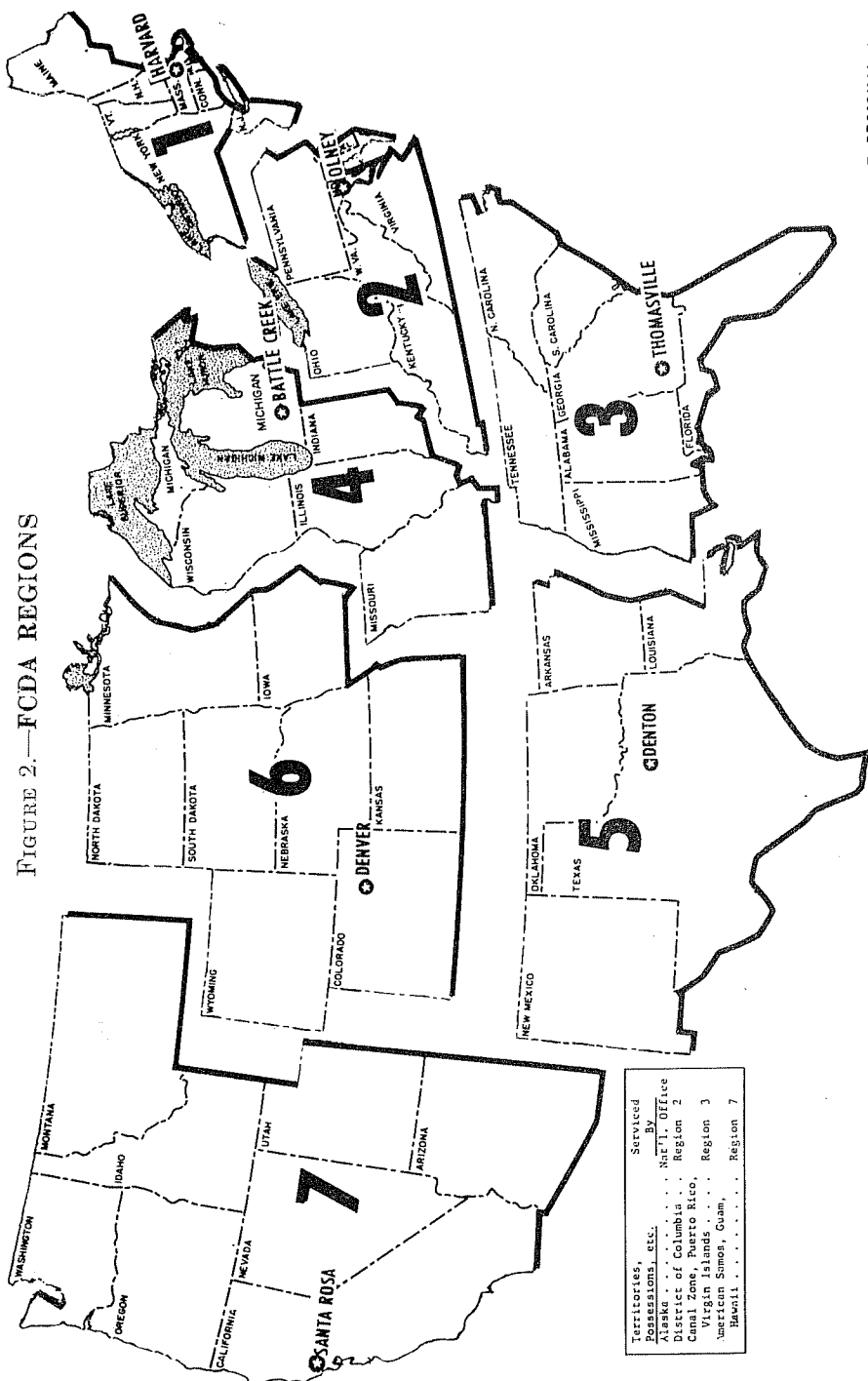
FIGURE 1—FEDERAL CIVIL DEFENSE ADMINISTRATION ORGANIZATION CHART



Note—Alaska serviced by National Headquarters.



FIGURE 2—FCDA REGIONS



Territories, Possessions, etc.	Served By
Alaska . . . . .	Natl'l. Office
District of Columbia . . . . .	Region 2
Guam . . . . .	Region 3
Puerto Rico . . . . .	Region 3
Virgin Islands . . . . .	Region 3
Western Samoa . . . . .	Region 3
Hawaii . . . . .	Region 7



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## INTRODUCTION

The Federal Civil Defense Administration was created by the Federal Civil Defense Act of 1950, Public Law 920, passed January 12, 1951, by the 81st Congress.

Principal responsibilities of the Administrator under this Act are to :

- a.* Prepare national civil defense plans and programs.
- b.* Delegate appropriate civil defense responsibilities to other Federal agencies.
- c.* Provide for necessary communications and warning systems.
- d.* Develop civil defense measures to protect life and property.
- e.* Train people in civil defense organization, operations, and techniques.
- f.* Disseminate appropriate civil defense information to the public.
- g.* Encourage the States to enter into interstate civil defense compacts.
- h.* Procure civil defense materials and facilities.
- i.* Make available Federal funds to the States, on a matching basis, for civil defense programs approved by the Administrator.

This annual report shows in summary form the progress made in several aspects of civil defense and particularly in the programs carried on directly by FCDA.

## ADMINISTRATOR'S REPORT

Fiscal year 1956 was a year of considerable progress for the Federal Civil Defense Administration. Reports on the accomplishments and progress of our various services and in our many fields of activity are detailed in the body of this annual report and I will make no attempt to summarize them in this brief foreword.

Rather, I prefer to devote this space to a discussion of a different kind of development and progress, and a look into our needs of the future.

It was clear at the close of fiscal year 1956 that civil defense had won greater acceptance. Americans appeared to have recognized that civil defense has become a permanent part of our way of life. Even more important, there appeared to be agreement that it was necessary to improve civil defense, as an indispensable and urgently needed defensive weapon in the event this Nation should ever be attacked, and as a force, which if known to be capable of fulfilling its assigned task, would deter a potential aggressor from risking an attack.



Development of new and more destructive weapons was accompanied by recognition of the need for an updating—a modernization—of the Federal Civil Defense Law which was written before the advent of the hydrogen bomb, and before the intercontinental ballistic missile loomed on the horizon.

In the letter which President Eisenhower addressed to me on July 17, 1956, the President pointed out that our whole civil defense effort needs “both strengthening and modernizing.” He added: “It is evident that the exigencies of the present threat require vesting in the Federal Government a larger responsibility in our national plan of civil defense.”

The President made specific recommendations in connection with revision of the Federal Civil Defense Law. He declared: “Plans to meet postattack situations are, of course, essential, but the Federal Civil Defense Administration needs authority to carry out necessary preattack preparations as well. It must be enabled to assure adequate participation in the civil defense program. It must be empowered to work out logical plans for possible target areas which overlap State and municipal boundaries. It must have an organization capable of discharging these increased responsibilities. Moreover, the prestige and effectiveness of the Federal Civil Defense Administration must be equal to the heavy responsibility it holds.”

We in FCDA are giving continuing study to ways and means of accomplishing this modernization of civil defense law to make possible the strengthening of civil defense organizations on all levels.

It is important however, that we avoid Federal preemption of all civil defense programs which are dependent upon widespread civilian participation. The Federal Government cannot give the Nation civil defense. As President Eisenhower has pointed out, should an emergency occur, our Nation’s survival may be dependent upon the way each of us responds to his duty. In an area attacked, survival will initially rest mainly with the individual and the community.

That is why, in all our planning, we stress a partnership between the Federal Government, States, cities, and towns. During fiscal year 1956, FCDA developed closer cooperation with the States than ever before. Each program, each new decision affecting major policy, was discussed in advance with State civil defense directors. We look forward to an intensification of this program next year.

The basic concept of civil defense remained unchanged during fiscal year 1956. Our concept—as it has been since the recognition of the fallout danger—is a balanced program of evacuation and shelter. Changing conditions may dictate from time to time that greater stress be placed on one or the other of these defense methods. However, neither by itself can be advanced as a complete solution. The



proper combination of the two programs still holds the best hope for saving lives.

## **CIVIL DEFENSE COORDINATING BOARD**

The Civil Defense Coordinating Board was established by Executive Order 10611 on May 11, 1955.

The Board is composed of the Administrator of FCDA, who is the Chairman of the Board, and 17 other members.

The functions of the Board are:

a. To assist in the development of a plan for the participation of all Federal departments and agencies in the civil defense of the Nation.

b. To recommend to the President specific arrangements for civil defense responsibilities to be assumed by various Government departments and agencies.

c. To facilitate such arrangements with the Department of Defense and the Office of Defense Mobilization.

d. To advise the President of the progress of the plan.

The first special meeting of the Board was held in Washington, on August 2, 1955. Members of delegate agencies discussed allocation of \$1,500,000 appropriated by Congress to FCDA for distribution to the delegate agencies.

The third regular meeting was held in Washington, on September 12, 1955. Civil defense progress, deficiencies, and recommendations for the future were discussed. The fourth, fifth, and sixth regular meetings were held on October 11, November 10, and December 20, 1955. Agency opinions were discussed and an agreement reached on FCDA's initial proposals of the Agency legislative program to be submitted to the Cabinet. Other subjects discussed were integration of civil defense into all departments and agencies of the Federal Government, Operation Alert 1956, and FCDA survival studies.

On March 27, 1956, Board members met in Battle Creek, Mich., for an all-day briefing and discussion of the civil defense program. On May 22, 1956, a meeting was held in Washington to discuss plans for Operation Alert, to review a paper proposing a Federal financial policy for emergencies and a paper establishing a tentative timetable for civil defense planning.

## **CIVIL DEFENSE SCIENTIFIC ADVISORY COMMITTEE**

The Civil Defense Scientific Advisory Committee, composed of leading scientists in a variety of fields, was formed by the National Academy of Sciences at the request of FCDA. The members of the committee serve without pay, and the committee advises the agency



on technical and scientific problems. During fiscal year 1956, the travel and administrative expenses incurred by the committee were financed through research funds.

Dr. Merle Tuve, physicist, Department of Terrestrial Magnetism, Carnegie Institution, Washington, D. C., is chairman of the committee. Other members of the committee are:

Mr. Willard Bascom, technical director, research engineer on leave from the University of California.

Mr. Gerhard D. Bleicken, attorney, John Hancock Mutual Life Insurance Co.

Dr. Herbert M. Bosch, sanitary engineer, professor, University of Minnesota.

Dean David Cavers, attorney, associate dean, Harvard University Law School.

Dr. Eugene P. Cronkite, physician and hematologist, Brookhaven National Laboratory.

Dr. Richard M. Emberson, physicist, Associated Universities, Inc.

Mr. E. H. Holmes, highway engineer, United States Bureau of Public Roads.

Dr. Rensis Likert, sociologist, director of the Institute for Social Research, University of Michigan.

Dr. R. B. Roberts, physicist, Department of Terrestrial Magnetism, Carnegie Institution, Washington, D. C.

Dr. Herbert Scoville, Jr., physicist, Armed Forces Special Weapons Project, Department of Defense.

Dr. Lauriston S. Taylor, physicist, chief, Division of Atomic and Radiation Physics, National Bureau of Standards.

Meetings were held on July 15 and December 20, 1955, at the Dupont Circle Building, Washington, D. C. In addition there were numerous meetings of panels of the committee established to consider specific questions.

Committee recommendations are communicated to the FCDA in written reports, in memoranda from the chairman or technical director, and in oral briefings by the technical director.

During fiscal year 1956 the following reports were made by the committee:

Recommended Research Program for Civil Defense. July.  
Revision of Proposed Evacuation-Shelter Policy. November.  
Report on Civil Defense in Arlington Public Schools. September.  
Report on Operation Green Light, Portland, Oreg. September.  
Report on Washington, D. C., Warning System. October.  
Legal Measures to Provide a Civil Defense in West Germany.  
April.

Federal Civil Defense Legislation. April.

Civil Defense Against Great Fires. June.



## NATIONAL CIVIL DEFENSE ADVISORY COUNCIL

During 1956, 3 new members were appointed to the 12-member National Civil Defense Advisory Council replacing members whose terms had expired, and 4 were reappointed.

At the close of the year the following were members:

Hon. Arthur B. Langlie, Governor of Washington  
Hon. Goodwin J. Knight, Governor of California (new member)  
Hon. Allen B. Shivers, Governor of Texas (new member)  
Hon. John B. Hynes, Mayor of Boston (new member)  
Hon. Albert E. Cobo, Mayor of Detroit (reappointed)  
Hon. Clifford E. Rishell, Mayor of Oakland, Calif. (reappointed)  
Mrs. Katherine G. Howard, Boston, Mass. (reappointed)  
Mrs. Charles W. Weis, Jr., Rochester, N. Y. (reappointed)  
Gordon Dean, former Chairman of the Atomic Energy Commission  
Gen. Otto L. Nelson, Vice President of New York Life Insurance Co.  
Hon. Okey L. Patteson, former Governor of West Virginia  
George J. Richardson, Secretary-Treasurer, International Association of Fire Fighters, American Federation of Labor

During fiscal year 1956, the Council met twice. Meetings were held at Omaha, Nebr., headquarters of the Strategic Air Command and at Battle Creek, Mich., FCDA Headquarters.

At the Omaha meeting the Council discussed the FCDA survival plan program, and a paper prepared for the President by FCDA concerning civil defense deficiencies and recommendations for the future. Strategic Air Command personnel presented a classified briefing for the Council.

At the Battle Creek meeting the Council discussed the congressional hearings on civil defense conducted by the subcommittee (Holifield Committee) of the House Committee on Government Operations; new developments in civil defense; and the new civil defense programs—continuity of State and local government and reduction of urban vulnerability. Members of the FCDA planning staff gave classified briefings on strategic warning, the threat this Nation faces, and the basic responsibilities FCDA would assume in an emergency.

## CIVIL DEFENSE PLANNING ASSUMPTIONS

These planning assumptions are effective as of September 4, 1956. They will be amended or, if necessary, replaced by new assumptions whenever changes of sufficient magnitude clearly indicate that this issuance is inadequate.



These assumptions are intended to cover several developmental phases of modern war. These start with the present period when jet aircraft have not fully replaced conventional propeller-driven aircraft, continue through the time when jet bombers may become sonic or slightly supersonic in speed, and anticipate the time when some intermediate-range ballistic missiles (IRBM) and intercontinental ballistic missiles (ICBM) may be available.

Since there is no evidence that any nation has yet overcome all of the scientific problems involved in either the IRBM or the ICBM, the major emphasis of these assumptions is on presently available means of delivery. The prime characteristic of this period is the possession by a potential enemy of the means of making nuclear weapons of megaton yield and of delivering them on distant targets by piloted aircraft. Improvements in both offensive and defensive capabilities are virtually certain. However, the strategy and tactics of civil defense are not likely to require major change from those currently being developed until some new technological breakthrough is achieved.

Planning assumptions are sometimes misunderstood. Frequently they are taken for predictions. Planning assumptions are in no sense predictions. Nor are they based on uncontrovertible facts that lead to only one conclusion. Planning assumptions are created by a need for broad estimates in areas where one is bound to be unsure. Civil defense needs to have a common base for planning in several different areas. Consequently, FCDA carefully canvasses available intelligence and available information and then establishes assumptions consistent with such estimates.

These assumptions give a basis on which Federal, State, and local civil defense authorities can develop plans and can set priorities of action. It is expected that each agency with civil defense responsibilities will review its plans in the light of these assumptions.

### Basic Premises

- A. It is accepted that a potential enemy has the capability of attacking any target within the United States or its possessions.
- B. It is accepted that a potential enemy has the capability of:
  1. Producing nuclear weapons, biological and chemical warfare agents, as well as conventional incendiary and high explosive weapons.
  2. Delivering these weapons by piloted aircraft, submarine launched missiles or mines, and by clandestine means.
  3. Supporting a large scale war effort by technical and industrial skills and organizations.



- C. It is accepted that a potential enemy is engaged in a major effort to develop both guided and ballistic missiles, including the ICBM.

### **Type of Attack**

- A. It is assumed that the greatest weight of attack will be nuclear since the capability of a potential enemy may reach, in the next few years, a size which it could consider as exceeding the destructive tonnage necessary to win a war.
- B. It is assumed that, if the United States is attacked, the major effort will consist of delivering nuclear weapons upon bases of military retaliation and centers of population and industry.
1. It is assumed that, until the intercontinental ballistic missile is available to an aggressor, principal reliance will be placed upon delivery by manned bombers, with higher speed and performance jet bombers tending to replace propeller-driven bombers.
  2. It is further assumed that, even when the intercontinental ballistic missile is available, a considerable weight of attack will continue to require delivery by manned aircraft.
  3. It is assumed that the time is distant when any nation will possess enough very long-range missiles to make possible the instant destruction of another nation.
- C. It is assumed that nuclear weapons will also be delivered by missiles or mines from submarines or surface vessels or by clandestine means, on a scale considerably less than that of the air attack. Their use independent of an air attack is not considered likely. Danger from naval attack decreases with distance from the coast.
- D. It is assumed that surface bursts will generally be employed since radioactive fallout from such bursts can increase casualties and interfere with military or civilian activity for days or weeks.
- E. It is assumed that, although nuclear weapons will be relied upon as the means of gaining the military decision, chemical warfare and biological warfare agents will be used against humans. Use of these weapons will be to increase confusion and impede defensive actions. The chances of use of such weapons are greater in subsequent attacks than in the initial blow. In any case, the threat is minor as compared with that of nuclear weapons.
- F. It is assumed that biological warfare agents will be employed against animals and crops, especially if long-term recuperative power gives indications of being a decisive factor. Use of this weapon on any large scale is unlikely in the initial blow.
- G. It is assumed that psychological warfare and all-out propaganda efforts will accompany any attack in order to magnify and distort the real situation, to disrupt defense programs, impair essential production, and weaken our will to fight.



- H. It is assumed that, in addition to clandestine introduction of nuclear weapons, sabotage will be employed, involving conventional means as well as biological and chemical weapons.
- I. It is assumed that the enemy's initial attack will be an attempted knockout blow, placing primary reliance on nuclear weapons delivered by air. It is assumed that there will be subsequent attacks of varying intensity, employing in addition other weapons and means of delivery.

## Targets

- A. It is assumed that bases of military retaliation, other important military installations, and concentrations of population and industry will be targets for nuclear attack.
- B. It is assumed that an aggressor will select targets from the following categories with priorities determined by its objectives at any particular time:
  - 1. Critical Target Areas as defined in "Target Areas for Civil Defense Purposes."
  - 2. Civil and military airfields with hardsurfaced runways of 7,000 feet or more, with major servicing and maintenance facilities.
  - 3. Major harbors, ports, and naval bases.
  - 4. AEC facilities.
  - 5. Major military command and control headquarters, such as the Pentagon, Continental Army Command, Naval Sea Frontiers, Strategic Air Command, Continental Air Command, and Tactical Air Command.
  - 6. Target Areas other than CTA's as defined in "Target Areas for Civil Defense Purposes," including all State capitals.
  - 7. Army and Marine Corps posts and stations housing divisions of the General Reserve and Fleet Marine Force.
  - 8. Major military service supply depots.

In many cases, a number of the above military and civilian categories will be found close together. For example, New York City meets the criteria of at least the following categories: (a) Critical Target Area; (b) Major port; (c) Naval Base; (d) Airfields with hardsurfaced runways in excess of 7,000 feet.

- C. It is assumed that an aggressor may frequently choose to direct attack at any one, several, or all aiming points within a target area. Some targets contain only one probable aiming point. Most, however, either because they are large in area or because they are composed of a variety of military and civilian targets, contain a number of aiming points.



- D. It is assumed that all possible targets will not be attacked either in the initial blow or subsequently. The number of targets to be attacked or the pattern of attack cannot reasonably be predicted at any specific date.

### Weapon Size and Physical Damage

- A. It is assumed that a potential enemy can produce nuclear weapons of varying yields ranging from few kilotons (thousands of tons) to megatons (millions of tons) of TNT equivalent.
- B. It is assumed that a potential enemy's stockpile of nuclear weapons is growing and that the number of megaton yield weapons will, in the course of time, become large enough to permit employment of such weapons on progressively larger numbers of targets.
- C. It is assumed that, for the development of civil defense plans for (a) evacuation and reception; (b) relocation or dispersal; (c) shelter requirements and criteria, the nuclear weapons used will cause complete destruction (A-Zone) within a radius of 2 miles as a minimum, 5 miles as a maximum.
- D. It is assumed that bombing errors will occur and that the aiming point and actual ground zero will seldom exactly coincide. It is assumed, however, that the area of complete destruction will generally be of sufficient size to include such an aiming point in cases where the attacking aircraft reaches its bomb release line.
- E. It is assumed that any target hit by nuclear weapons will be substantially destroyed by the direct effects of blast, heat, and radiation. A number of targets will require more than one detonation because of (1) total area; (2) shape, particularly when one axis is considerably longer than another; (3) wide separation of rewarding aiming points.
- F. It is assumed that radioactive fallout resulting from surface bursts of weapons, whether on or off target, will spread downwind over considerable areas. Fallout from a large-scale attack could affect any portion of the United States.
- G. It is assumed that a potential enemy can produce a considerable variety of biological and chemical warfare agents and can deliver them on the United States. It is assumed, however, that large-scale delivery of such weapons will be less accurate and less damaging than the delivery of nuclear weapons by a similar number of carriers.

### Warning Time

- A. It is assumed that a civil defense alert of an initial mass attack by manned aircraft will be received on the Canadian border and the Atlantic, Pacific, and Gulf coasts from 1 to 3 hours before



targets within these boundaries will be under attack. It is expected that intelligence on the probable time that attacking planes will take to reach specific targets will be available to civil defense through the Civil Air Defense Warning system.

- B. It is assumed that interior targets will have 1 to 3 hours additional between the time a civil defense alert is received and the time when interior targets are under attack from manned aircraft.
- C. No definite assumptions can be made of the availability of strategic warning. However, plans should also include the contingency of a strategic warning, announced to the Nation by the President, before any direct attack on this country had been initiated. It might be measured in hours or even days, and would make possible more careful and detailed preparations for an actual alert. We can never be sure that there will be strategic warning. Emphasis should be placed on maximum utilization of tactical warning since the probability of such warning is much higher.

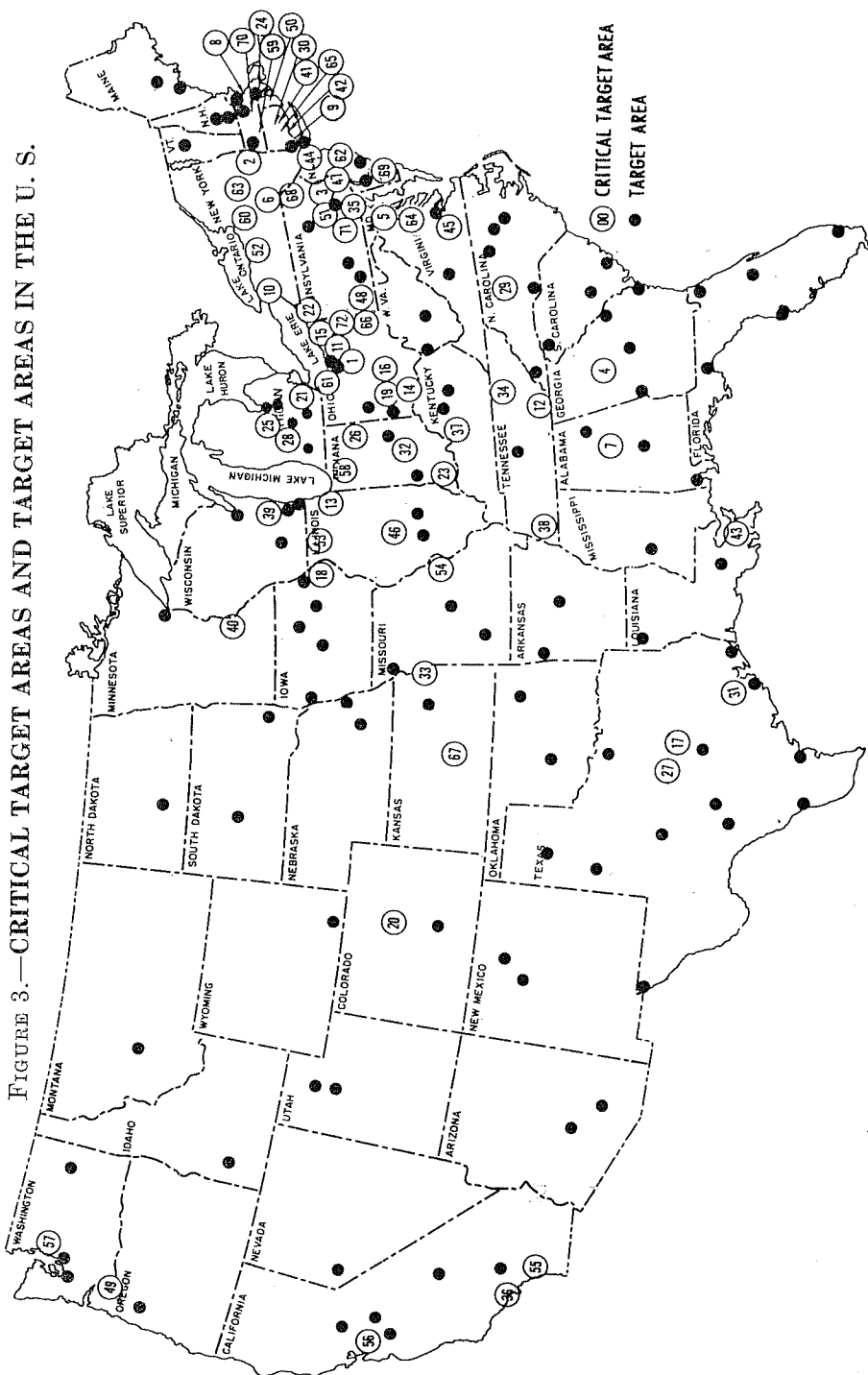
## CRITICAL TARGET AREAS AND TARGET AREAS

The target areas and critical target areas listed in this report have been so designated on the basis of population and industry criteria. FCDA, in conjunction with other Federal agencies, is currently developing an expanded list of target and critical target areas which will incorporate certain military considerations as well as civil defense criteria. The new list, consonant with current planning assumptions, will be issued at a later date.

One hundred and eighty-seven areas in the continental United States have been designated target areas meeting the population and industry criteria. (In addition, eight areas in United States Territories and possessions have been so designated.) The 187 target areas include all standard metropolitan areas as defined by the Federal Committee on Standard Metropolitan Areas, and all State capitals not already included as standard metropolitan areas. Seventy-two of the 187 areas have been designated critical target areas. These are the standard metropolitan areas having 40,000 or more industrial employees as reported by the United States Department of Labor. Washington, D. C., because of its importance as the Nation's capital, is listed as a critical target area.

Locations of the 187 areas are shown on the following map (fig. 3). These are areas regarded for civil defense purposes as probable targets for nuclear attack since they contain major concentrations of population and industry.







The following changes in target area definitions were made within the past year as a result of action by the Federal Committee on Standard Metropolitan Areas:

1. The title of the Los Angeles area was changed to Los Angeles-Long Beach. This was simply a change in title, not in area covered.

2. The definition of the Evansville, Ind., area was amended to include Henderson County, Ky.

3. The definition of the Atlanta, Ga., area was amended to include Clayton County, Ga.

4. The West Palm Beach, Fla., standard metropolitan area was established and hence will be regarded as an additional target area.

Two areas formerly classified as target areas are now included in the list of critical target areas; namely, Greensboro-High Point, N. C., and Rockford, Ill. These were changed to critical target areas upon meeting the criteria of standard metropolitan areas having 40,000 or more industrial employees as reported in at least three consecutive issues of the "Bi-Monthly Summary of Labor Market Developments in Major Areas" published by the Department of Labor.

The latest census figures on population of most critical target areas are as of 1950. The United States Bureau of the Census has made estimates for four of the areas, however, as of January 1, 1956; namely, Houston, Milwaukee, St. Louis, and Washington, D. C. A total of the latest figures available indicates about 69,158,000 people in the 72 areas.

Each of these areas is a standard metropolitan area as defined by the Federal Committee on Standard Metropolitan Areas. Except in New England, each area is composed of a county or group of closely integrated contiguous counties, having at least one city of 50,000 inhabitants or more. In New England, towns and cities were the units used in defining standard metropolitan areas, with population density the principal criterion.

Since most critical target areas contain entire counties, they may have some rural as well as urban territory. The thickly settled urban core of each standard metropolitan area is referred to as its urbanized area.

Each critical target area has at least one central city of 50,000 or more inhabitants. Some areas have two or more such cities. In the following table the largest city in each of the 72 critical target areas and all other cities of 90,000 or more in the areas are listed as "principal cities" with a comparison of each city's resident population with its day population. The 94 principal cities in the 72 CTA's had a resident population of 41,345,000. Their combined day population was 48,508,000 or 18 percent larger than resident population. In six cities (Som-



erville, Mass.; Long Beach, Berkeley, and Richmond, Calif.; Jersey City, N. J., and Yonkers, N. Y.) the day population is less than resident population as commuters go into the larger central cities in their daily employment. In several cities, population in the daytime increases 50 percent or more over resident population. The population of Newark, N. J., more than doubles in the daytime.

### Critical Target Area Population

Map reference No. <sup>1</sup>	Critical target area and principal cities	Population (1950 except where noted)				
		Critical target area	Urbanized area	Principal city <sup>2</sup>		
				Resident	Day <sup>3</sup>	Percent of resident
					Number	
	Total.....	69, 158, 283	( <sup>4</sup> )	41, 345, 129	( <sup>4</sup> )	( <sup>4</sup> )
1	Akron, Ohio.....	410, 032	366, 765	274, 605	314, 069	115
2	Albany-Schenectady-Troy, N. Y.....	514, 400	291, 897	134, 995	166, 975	124
3	Albany-Schenectady-Troy, N. Y.....			91, 785	108, 470	118
4	Allentown-Bethlehem-Easton, Pa. (N. J.).....	437, 824	225, 962	106, 756	141, 150	132
5	Atlanta, Ga.....	694, 669	507, 887	331, 314	416, 569	126
6	Baltimore, Md.....	1, 337, 373	1, 161, 852	949, 708	1, 071, 104	113
7	Binghamton, N. Y.....	184, 698	144, 011	80, 674	96, 033	110
8	Birmingham, Ala.....	558, 928	445, 314	326, 037	451, 892	139
9	Boston, Mass.....	2, 369, 986	2, 333, 448	801, 444	1, 075, 107	134
10	Bridgeport, Conn.....			99, 738	117, 796	118
11	Buffalo, N. Y.....	1, 089, 230	798, 043	120, 740	147, 884	122
12	Cambridge, Mass.....			102, 351	90, 693	89
13	Chattanooga, Tenn. (Ga.).....	258, 137	237, 435	158, 709	209, 282	132
14	Chicago, Ill. (Ind.).....	5, 495, 364	4, 920, 816	580, 132	717, 098	124
15	Cincinnati, Ohio (Ky.).....	904, 402	813, 292	90, 872	100, 945	111
16	Cleveland, Ohio.....	1, 465, 511	1, 383, 599	116, 912	155, 724	133
17	Columbus, Ohio.....	503, 410	437, 707	131, 041	159, 660	122
18	Dallas, Tex.....	614, 799	538, 924	3, 620, 962	4, 251, 643	117
19	Dayton, Ohio.....	457, 333	346, 864	133, 911	156, 425	117
20	Denver, Colo.....	563, 832	498, 743	503, 998	620, 473	123
21	Detroit, Mich.....	3, 016, 197	2, 659, 398	914, 808	1, 085, 830	119
	Dearborn, Mich.....			375, 901	422, 752	112
	Davenport, Iowa-Rock Island-Moline, Ill.....	234, 256	194, 925	434, 462	497, 621	115
	Dayton, Ohio.....			74, 549	112, 271	151
	Dayton, Ohio.....			243, 872	301, 546	124
	Denver, Colo.....			415, 786	466, 626	112
	Detroit, Mich.....			1, 849, 568	2, 181, 689	118
	Dearborn, Mich.....			94, 994	152, 381	160

See footnotes at end of table.



## Critical Target Area Population—Continued

Map reference No. <sup>1</sup>	Critical target area and principal cities	Population (1950 except where noted)				
		Critical target area	Urbanized area	Principal city <sup>2</sup>		
				Resident	Day <sup>3</sup>	
					Number	Percent of resi- dent
22	Erie, Pa.	219,388	151,710			
	Erie			130,803	155,406	119
23	Evansville, Ind. (Ky.)	191,137	<sup>6</sup> 137,573	128,636	141,376	110
24	Fall River-New Bedford, Mass.					
	(R. I.)	274,767	243,615	111,963	122,666	110
	Fall River			109,189	120,643	110
	New Bedford					
25	Flint, Mich.	270,963	197,631	163,143	192,204	118
	Flint			133,607	151,042	113
26	Fort Wayne, Ind.	183,722	140,314	278,778	309,781	111
	Fort Wayne					
27	Fort Worth, Tex.	361,253	315,578	176,515	208,373	118
	Fort Worth					
28	Grand Rapids, Mich.	288,292	226,817	74,389	( <sup>1</sup> )	( <sup>1</sup> )
	Grand Rapids					
29	Greensboro-High Point, N. C.	191,057	( <sup>1</sup> )			
	Greensboro					
30	Hartford, Conn.	358,081	300,788	177,397	229,099	129
	Hartford			711,000	775,100	109
31	Houston, Tex.	<sup>7</sup> 1,077,000	700,508			
	Houston					
32	Indianapolis, Ind.	551,777	502,375	427,173	484,222	113
	Indianapolis			129,553	140,336	108
33	Kansas City, Mo. (Kans.)	814,357	698,350	456,622	529,241	116
	Kansas City, Kans.					
	Kansas City, Mo.					
34	Knoxville, Tenn.	337,105	148,166	124,769	167,696	134
	Knoxville					
35	Lancaster, Pa.	234,717	76,280	63,774	102,690	161
	Lancaster					
36	Los Angeles-Long Beach, Calif.	4,367,911	3,996,946	1,970,358	2,590,743	131
	Los Angeles			95,702	67,779	102
	Glendale			250,767	245,714	98
	Long Beach			104,577	122,898	118
	Pasadena					
37	Louisville, Ky. (Ind.)	576,900	472,736	369,129	424,718	115
	Louisville			396,000	436,170	110
38	Memphis, Tenn.	482,393	406,034	711,000	772,600	109
	Memphis			521,718	593,477	114
39	Milwaukee, Wis.	<sup>7</sup> 975,000	829,495	311,349	346,267	111
	Milwaukee					
40	Minneapolis-St. Paul, Minn.	1,116,509	985,101	521,718	593,477	114
	Minneapolis			311,349	346,267	111
	St. Paul					
41	New Britain-Bristol, Conn.	146,983	123,079	73,726	84,643	115
	New Britain					
42	New Haven, Conn.	264,622	244,836	164,443	194,114	118
	New Haven					
43	New Orleans, La.	685,405	659,768	570,445	622,288	109
	New Orleans					
44	New York-Northeast New Jersey	12,911,994	12,296,117	7,891,957	8,201,842	104
	New York City			112,817	116,145	103
	Elizabeth, N. J.			299,017	295,954	99
	Jersey City, N. J.			438,776	884,801	202
	Newark, N. J.			139,336	161,116	116
	Paterson, N. J.			152,798	140,293	92
	Yonkers, N. Y.					
45	Norfolk-Portsmouth-Newport News, Va.	594,817	385,111	213,513	285,666	134
	Norfolk					
46	Peoria, Ill.	250,512	154,539	111,856	146,758	131
	Peoria			2,071,605	2,466,284	119
47	Philadelphia, Pa. (N. J.)	3,671,048	2,922,470	124,555	144,468	116
	Philadelphia					
	Camden, N. J.					
48	Pittsburgh, Pa.	2,213,236	1,532,953	676,806	1,011,618	140
	Pittsburgh					

See footnotes at end of table.



## Critical Target Area Population—Continued

Map reference No. <sup>1</sup>	Critical target area and principal cities	Population (1950 except where noted)				
		Critical target area	Urbanized area	Principal city <sup>2</sup>		
				Resident	Day <sup>3</sup>	
					Number	Percent of resident
49	Portland, Oreg. (Wash.)	704,829	512,643			
	Portland			373,628	468,699	125
50	Providence, R. I. (Mass.)	737,203	583,346			
	Providence			248,674	371,896	150
51	Reading, Pa.	255,740	154,931			
	Reading			109,320	179,112	164
52	Rochester, N. Y.	487,632	409,149			
	Rochester			332,488	383,325	115
53	Rockford, Ill.	152,385	122,226			
	Rockford			92,927	(4)	(4)
54	St. Louis, Mo. (Ill.)	1,892,000	1,400,058			
	St. Louis			841,000	1,002,200	119
55	San Diego, Calif.	556,808	432,974			
	San Diego			334,387	399,198	119
56	San Francisco-Oakland, Calif.	2,240,767	2,022,078			
	San Francisco			775,357	1,012,145	131
	Oakland			384,575	491,670	128
	Berkeley			113,805	102,311	90
	Richmond			99,545	89,016	89
57	Seattle, Wash.	732,992	621,509			
	Seattle			467,591	550,842	118
58	South Bend, Ind.	205,058	168,165			
	South Bend			115,911	155,610	134
59	Springfield-Holyoke, Mass. (Conn.)	407,255	356,908			
	Springfield			162,399	210,085	129
60	Syracuse, N. Y.	341,719	265,286			
	Syracuse			220,583	258,380	117
61	Toledo, Ohio	395,551	364,344			
	Toledo			303,616	342,057	113
62	Trenton, N. J.	220,781	189,321			
	Trenton			128,009	156,953	123
63	Utica-Rome, N. Y.	284,262	117,424			
	Utica			101,531	130,825	129
64	Washington, D. C. (Md.-Va.)	1,884,000	1,287,333			
	Washington, D. C.			859,000	980,100	114
65	Waterbury, Conn.	154,656	131,707			
	Waterbury			104,477	120,685	116
66	Wheeling, W. Va.-Steubenville, Ohio	354,092	106,650			
	Wheeling			58,891	95,532	162
67	Wichita, Kans.	222,290	194,047			
	Wichita			168,279	182,992	109
68	Wilkes-Barre-Hazleton, Pa.	392,241	271,589			
	Wilkes-Barre			76,826	99,358	129
69	Wilmington, Del. (N. J.)	268,387	187,359			
	Wilmington			119,356	146,929	133
70	Worcester, Mass.	276,336	219,330			
	Worcester			203,485	228,125	112
71	York, Pa.	202,737	78,796			
	York			59,953	94,276	157
72	Youngstown, Ohio (Pa.)	528,498	298,051			
	Youngstown			168,330	248,598	148

<sup>1</sup> Refers to map entitled "Critical Target Areas and Target Areas in the U. S."<sup>2</sup> Includes the largest city in each of the 72 Critical Target Areas and all other cities of 90,000 population or more within the areas.<sup>3</sup> Normal maximum day population as estimated by the U. S. Bureau of the Census.<sup>4</sup> Not available.<sup>5</sup> Does not include data for Clayton County, Ga.<sup>6</sup> Does not include data for Henderson County, Ky.<sup>7</sup> Estimates as of Jan. 1, 1956.

Source: U. S. Bureau of the Census—1950.



Population of Target Areas <sup>1</sup>

Target area	Population (1950)	Target area	Population (1950)
Total, 123 areas .....	18, 910, 205		
Agana City, Guam .....	1, 330	Lowell, Mass. ....	133, 928
Albuquerque, N. Mex. ....	145, 673	Lubbock, Tex. ....	101, 048
Altoona, Pa. ....	139, 514	Macon, Ga. ....	135, 043
Amarillo, Tex. ....	87, 140	Madison, Wis. ....	169, 357
Asheville, N. C. ....	124, 403	Manchester, N. H. ....	88, 370
Atlantic City, N. J. ....	132, 399	Mayaguez, P. R. ....	87, 307
Augusta, Ga. (S. C.) .....	162, 013	Miami, Fla. ....	495, 084
Augusta, Maine. ....	83, 881	Mobile, Ala. ....	231, 105
Austin, Tex. ....	160, 080	Montgomery, Ala. ....	138, 965
Baton Rouge, La. ....	158, 236	Montpelier, Vt. ....	42, 870
Bay City, Mich. ....	88, 461	Muncie, Ind. ....	90, 252
Beaumont-Port Arthur, Tex. ....	195, 083	Nashville, Tenn. ....	321, 758
Bismarck, N. Dak. ....	25, 673	Ogden, Utah. ....	83, 319
Boise, Idaho. ....	70, 649	Oklahoma City, Okla. ....	325, 352
Brockton, Mass. ....	129, 428	Olympia, Wash. ....	44, 884
Carson City, Nev. ....	4, 172	Omaha, Nebr. (Iowa). ....	366, 395
Cedar Rapids, Iowa. ....	104, 274	Orlando, Fla. ....	114, 950
Charleston, S. C. ....	164, 856	Pago Pago, American Samoa. ....	1, 586
Charleston, W. Va. ....	322, 072	Phoenix, Ariz. ....	331, 770
Charlotte, N. C. ....	197, 052	Pierre, S. Dak. ....	8, 111
Charlotte Amalie, V. I. ....	11, 469	Pittsfield, Mass. ....	66, 567
Cheyenne, Wyo. ....	47, 682	Ponce, P. R. ....	126, 810
Columbia, S. C. ....	142, 565	Portland, Maine. ....	119, 942
Columbus, Ga. (Ala.) .....	170, 541	Pueblo, Colo. ....	90, 188
Concord, N. H. ....	63, 022	Racine, Wis. ....	109, 885
Corpus Christi, Tex. ....	165, 471	Raleigh, N. C. ....	136, 450
Decatur, Ill. ....	98, 853	Richmond, Va. ....	328, 050
Des Moines, Iowa. ....	226, 010	Roanoke, Va. ....	133, 407
Dover, Del. ....	37, 870	Sacramento, Calif. ....	277, 140
Dubuque, Iowa. ....	71, 337	Saginaw, Mich. ....	153, 515
Duluth, Minn.-Superior, Wis. ....	252, 777	St. Joseph, Mo. ....	96, 826
Durham, N. C. ....	161, 639	Salt Lake City, Utah. ....	101, 401
El Paso, Tex. ....	194, 968	San Angelo, Tex. ....	58, 929
Fort Smith, Ark. ....	64, 202	San Antonio, Tex. ....	509, 460
Frankfort, Ky. ....	25, 933	San Bernardino - Riverside - Ontario, Calif. ....	451, 688
Fresno, Calif. ....	276, 515	San Jose, Calif. ....	290, 547
Gadsden, Ala. ....	93, 892	San Juan-Rio Piedras, P. R. ....	465, 741
Galveston, Tex. ....	113, 096	Santa Fe, N. Mex. ....	38, 153
Green Bay, Wis. ....	98, 314	Savannah, Ga. ....	151, 481
Greenville, S. C. ....	168, 152	Scranton, Pa. ....	257, 396
Hamilton-Middletown, Ohio. ....	147, 203	Shreveport, La. ....	216, 686
Harrisburg, Pa. ....	292, 241	Sioux City, Iowa. ....	103, 917
Helena, Mont. ....	24, 540	Sioux Falls, S. Dak. ....	70, 910
Honolulu, T. H. ....	353, 020	Spokane, Wash. ....	221, 561
Huntington, W. Va.-Ashland, Ky. (Ohio) .....	245, 795	Springfield, Ill. ....	131, 484
Jackson, Mich. ....	107, 925	Springfield, Mo. ....	104, 823
Jackson, Miss. ....	142, 164	Springfield, Ohio. ....	111, 661
Jacksonville, Fla. ....	304, 029	Stamford-Norwalk, Conn. ....	196, 023
Jefferson City, Mo. ....	35, 464	Stockton, Calif. ....	200, 750
Johnstown, Pa. ....	291, 354	Tacoma, Wash. ....	275, 876
Juneau, Alaska. ....	5, 956	Tallahassee, Fla. ....	51, 590
Kalamazoo, Mich. ....	126, 707	Tampa-St. Petersburg, Fla. ....	409, 143
Kenosha, Wis. ....	75, 238	Terre Haute, Ind. ....	105, 160
Lansing, Mich. ....	172, 941	Topeka, Kans. ....	105, 418
Laredo, Tex. ....	56, 141	Tucson, Ariz. ....	141, 216
Lawrence, Mass. ....	125, 935	Tulsa, Okla. ....	251, 686
Lexington, Ky. ....	100, 746	Waco, Tex. ....	130, 194
Lima, Ohio. ....	88, 133	Waterloo, Iowa. ....	100, 448
Lincoln, Nebr. ....	119, 742	West Palm Beach, Fla. ....	114, 688
Little Rock-North Little Rock, Ark. ....	196, 685	Wichita Falls, Tex. ....	98, 493
Lorain-Elyria, Ohio. ....	148, 162	Winston-Salem, N. C. ....	146, 135

<sup>1</sup> Critical target areas are not included.

## ATTACK WARNING

Time required to disseminate an attack warning through the nationwide civil defense warning system was reduced to 8 minutes during fiscal year 1956. When FCDA was assigned the civilian attack warning responsibility in 1952, it required about 20 minutes to notify all key point centers of an alert.



Lest the reduction in time now required to disseminate warnings be misleading, it should be emphasized that FCDA responsibility extends only through the Federal warning system—down to key point warning centers. Action beyond those points is the responsibility of State and local governments.

In operating the Federal part of the warning network, FCDA works in close cooperation with the Air Force, which triggers alert warnings.

FCDA has assigned attack warning officers to control centers of each of the 16 Air Defense Divisions in the United States. The FCDA officers disseminate warnings over the Civil Air Defense Warning (CADW) network. This network consists of full-period, private, 2-way telephone circuits that connect the 16 civil defense warning centers with nearly 200 civil defense key point warning centers located strategically throughout the United States. FCDA pays the full communications costs of the system to the key points; and this is the only completely Federal portion of the warning system.

From the key points, the system fans out to more than 3,500 subkey point centers in the United States, located in such places as local police and fire stations. These, and the local centers that control the public attack warning devices, such as sirens, horns, and whistles, are the State and local part of the warning net.

FCDA provides matching funds for the purchase or installation of warning and communications equipment to the States and localities, but not the operating expenses. FCDA also provides technical and operational guidance in its various publications.

Communication facilities used by States for their warning systems include State police radio, teletype, telephone, and special systems such as bell-and-light (telephone), and tone generators (radio).

There are two public action signals: the "alert" signal, which may mean evacuation in certain areas and mobilization in others; and the "take cover" signal, which means that the public should take the best shelter available immediately.

Staffing to provide 24-hour coverage at FCDA warning centers by attack warning officers was about 85 percent complete at the end of the fiscal year.

In the last half of the fiscal year, a study was made of the effect of the new Air Force SAGE (Semi-Automatic Ground Environment) warning system on the civil air defense warning system. As a result, preliminary plans were made for relocation of FCDA warning centers, and tentative revisions outlined for attack warning procedures. To keep FCDA abreast of new developments in the SAGE system, an FCDA liaison officer was assigned to work with the SAGE staff at Lincoln Laboratories, Lexington, Mass., and with representatives of the Continental Air Defense Command.



An FCDA National Warning Control System (NAWAC), completed in May 1956, will provide a medium for fast exchange of tactical information between FCDA National Headquarters and alternate headquarters, regional offices, and air defense warning centers. By providing warning control, NAWAC will increase materially the operational efficiency of the FCDA attack warning system.

## Civil Defense Key Points

Map reference No. <sup>1</sup>	State	City	Map reference No. <sup>1</sup>	State	City
<i>9th Air Division</i>			<i>26th Air Division—Continued</i>		
1	Idaho-----	Boise.	13	New York-----	Albany.
2		Coeur D'Alene.	14		Binghamton.
3	Oregon-----	Pendleton.	15		Hawthorne.
4	Washington-----	Collfax.	16		Mincola.
5		Coulee.	17		Newburgh.
6		Pasco.	18		New York City.
7		Spokane.	19		Schenectady.
8		Wenatchee.	20		Troy.
9		Yakima.	21	Pennsylvania-----	Allentown.
<i>20th Air Division</i>			22		Harrisburg.
1	Illinois-----	East St. Louis.	23		Lancaster.
2		Peoria.	24		Philadelphia.
3		Rock Island.	25		Reading.
4		Springfield.	26		Seranton.
5	Iowa-----	Cedar Rapids.	27		Wilkes-Barre.
6		Council Bluffs.	28		Williamsport.
7		Davenport.	29	Rhode Island-----	Providence.
8		Des Moines.	<i>27th Air Division</i>		
9		Sioux City.	1	Arizona-----	Kingman.
10		Waterloo.	2	California-----	Bakersfield.
11	Kansas-----	Topeka.	3		El Centro.
12		Wichita.	4		Los Angeles.
13	Missouri-----	Jefferson City.	5		San Bernardino.
14		Kansas City.	6		San Diego.
15		St. Louis.	7		Santa Barbara.
16	Nebraska-----	Lincoln.	<i>28th Air Division</i>		
17		Omaha.	1	California-----	Fresno.
<i>25th Air Division</i>			2		Oakland.
1	Oregon-----	Engene.	3		Redding.
2		Medford.	4		Sacramento.
3		Portland.	5		Salinas.
4		Salem.	6		Ukiah.
5		The Dalles.	7	Nevada-----	Reno.
6	Washington-----	Everett.	<i>29th Air Division</i>		
7		Olympia.	1	Montana-----	Helena.
8		Port Angeles.	2	North Dakota-----	Bismarek.
9		Renton.	3	South Dakota-----	Pierre.
<i>26th Air Division</i>			4		Rapid City.
1	Connecticut-----	Bethany.	5	Wyoming-----	Cheyenne.
2		Colchester.	<i>30th Air Division</i>		
3		Hartford.	1	Indiana-----	Fort Wayne.
4		Ridgefield.	2		South Bend.
5	Delaware-----	Dover.	(2)	Michigan-----	BATTLE CREEK.
6	Massachusetts-----	Boston.	3		Bay City.
7		Brockton.	4		Detroit.
8		Northampton.	5		East Lausling.
9		Worcester.	6		Jackson.
10	New Jersey-----	Hammononton.			
11		Morristown.			
12		Trenton.			

<sup>1</sup> See footnotes at end of table.



## Civil Defense Key Points—Continued

Map reference No. <sup>1</sup>	State	City	Map reference No. <sup>1</sup>	State	City
<i>30th Air Division—Continued</i>			<i>32th Air Division</i>		
7	Michigan.....	Paw Paw.	1	Alabama.....	Birmingham.
8		Port Huron.	2		Gadsden.
9		Rockford.	3		Mobile
10	New York.....	Buffalo.	4	Florida.....	Montgomery.
11		Niagara Falls.	5		Jacksonville.
12		Rochester.	6		Miami.
13	Ohio.....	Cambridge.	7		Tallahassee.
14		Canton.	8		Tampa.
15		Cleveland.	9	Georgia.....	Atlanta.
16		Findlay.	10		Savannah.
17		Toledo.	11	Louisiana.....	Baton Rouge.
18		Youngstown.	12		New Orleans.
19	Pennsylvania.....	Altoona.	13	Mississippi.....	Jackson.
20		Butler.	14	South Carolina.....	Columbia.
21		Eric.			
22		Greensburg.	<i>37th Air Division</i>		
23		Pittsburgh.	1	Illinois.....	Chicago.
24		Punxsutawney.	2		Joliet.
25		Washington.	3		Park Forest.
26	West Virginia.....	Wheeling.	4		Rockford.
			5	Indiana.....	Crown Point.
<i>31st Air Division</i>			6	Michigan.....	Marquette.
1	Minnesota.....	Brainerd.	7		Sault Ste. Marie.
2		Duluth.	8		Traverse City.
3		Minneapolis.	9	Wisconsin.....	Appleton.
4		Rochester.	10		La Crosse.
5	North Dakota.....	St. Paul.	11		Madison.
6	Wisconsin.....	Fargo.	12		Milwaukee.
7		Eau Claire.	13		Stevens Point.
8		Superior.	14		Wausau.
<i>32d Air Division</i>			<i>58th Air Division</i>		
1	Maine.....	Augusta.	1	Illinois.....	Urbana.
2		Bangor.	2	Indiana.....	Evansville.
3		Houlton.	3		Indianapolis.
4		Portland.	4		Lafayette.
5	New Hampshire.....	Concord.	5		Muncie.
6		Littleton.	6		New Albany.
7	New York.....	Plattsburg.	7		Terre Haute.
8		Syracuse.	8	Kentucky.....	Frankfort.
9		Utica.	9	Ohio.....	Cincinnati.
10	Vermont.....	Montpelier.	10		Columbus.
11		Rutland.	11		Dayton.
			12		Ironton.
<i>33d Air Division</i>			13	Tennessee.....	Arlington.
1	Arkansas.....	Little Rock.	14		Chattanooga.
2	Louisiana.....	Bossier City.	15		Knoxville.
3	Oklahoma.....	Oklahoma City.	16		Nashville.
4		Tulsa.	17	West Virginia.....	Charleston.
5	Texas.....	Arlington.	18		Clarksburg.
6		Austin.	19		Parkersburg.
7		Boerne.			
8		Houston.			
			<i>85th Air Division</i>		
<i>34th Air Division</i>			1	District of Columbia.....	WASHINGTON.
1	Arizona.....	Phoenix.	(2)		
2	Colorado.....	Denver.	2	Maryland.....	Baltimore.
3	New Mexico.....	Santa Fe.	3		Hagerstown.
4	Texas.....	El Paso.	4	North Carolina.....	Salisbury.
5	Utah.....	Salt Lake City.	5	Virginia.....	Raleigh.
			6		Norfolk.
			7		Richmond.
			8	West Virginia.....	Martinsburg.

<sup>1</sup> Refers to map entitled "Critical Target Areas and Target Areas in the U. S."<sup>2</sup> FCDA Headquarters.



## Warning Systems of Principal Cities

The problem of adequate systems to warn city dwellers of an impending attack has been a major concern of civil defense from the inception of the program. States and cities have been encouraged to procure and install the necessary warning devices, with the Federal Government providing half of the funds under the Federal contributions program. Through June 30, 1956, a total of \$7,601,837 in Federal Funds had been obligated for the attack-warning programs of States and localities.

Of 261 principal cities in Target Areas and Critical Target Areas, 165 or 63 percent had good outdoor warning systems as of June 30. The remaining cities had varying degrees of warning efficiency with the systems in 22 cities regarded as completely inadequate. The 261 cities include all cities of 50,000 in the United States, Territories, and possessions.

Although satisfactory outdoor warning devices may be installed, there is still the problem of how to warn people in homes and other buildings from which the outdoor devices may not be heard. Under contract with FCDA, certain research organizations are engaged in studying and developing successful internal warning systems which can utilize existing power distributing or telephone facilities.

## RADIOACTIVE FALLOUT FORECAST PROGRAM

The need for defensive measures against possible radioactive fallout from nuclear explosions led to the establishment of a fallout forecast program by the United States Weather Bureau in June 1955. The program resulted from a civil defense delegation by FCDA to the Department of Commerce.

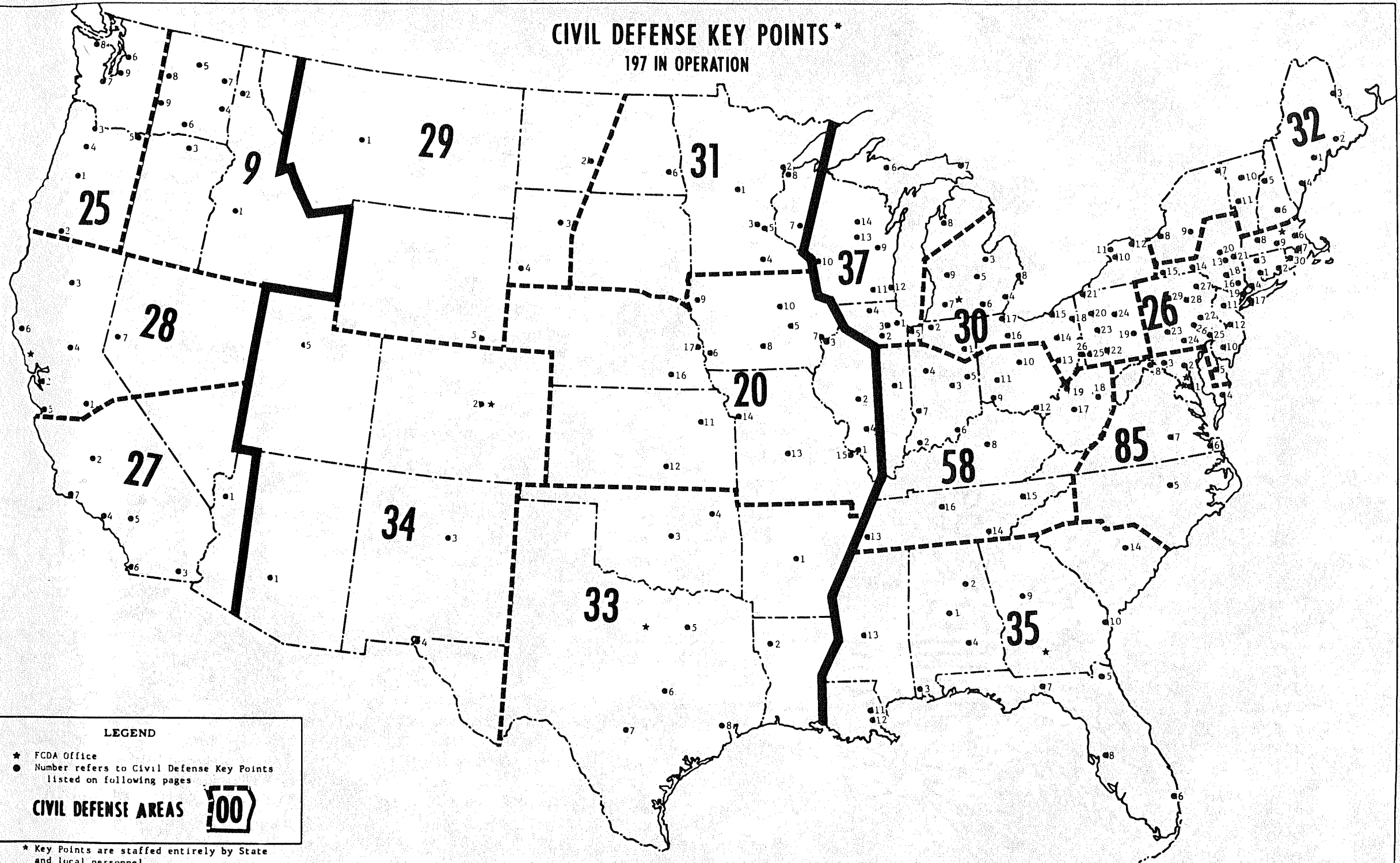
The initial program provided data for fallout patterns around the Nation's 72 Critical Target Areas. The program was expanded in February 1956 to cover the entire Nation, Alaska, and Hawaii.

The system is based on observations of wind direction and velocity taken twice daily at 52 Rawin Observatories (Radio or Radar Wind Direction Finding Observatories) scattered over the country as shown on the list, United States Weather Bureau Rawin Observatories, and map (fig. 5). Each station sends balloon-borne radio transmitters, called rawinsondes, as high as 100,000 feet to obtain readings on atmospheric pressure, temperature, and humidity. Data on wind speed and direction at various levels are obtained by radar tracking of the balloons.



# CIVIL DEFENSE KEY POINTS \*

197 IN OPERATION





The number of Rawin Observatories was scheduled to be increased from 52 to 68 for fallout forecast purposes on September 1, 1956. Arrangements also were in progress during the fiscal year for obtaining twice daily forecasts from eight locations in southern Canada.

## U. S. Weather Bureau Rawin Observatories

Region and State	City	Call letters	Region and State	City	Call letters
<i>Region 1</i>			<i>Region 5—Con.</i>		
Maine.....	Caribou.....	CAR	New Mexico.....	Albuquerque.....	ABQ
New York.....	Portland.....	PWM	Oklahoma.....	Oklahoma City.....	OKC
	Albany.....	ALB	Texas.....	Big Spring.....	MAF
	Buffalo.....	BUF		El Paso.....	ELP
	New York.....	HBM		Fort Worth.....	FWH
<i>Region 2</i>				San Antonio.....	SAT
District of Columbia.	Washington.....	WBG	<i>Region 6</i>		
Ohio.....	Dayton.....	FFO	Colorado.....	Denver.....	LRY
Pennsylvania.....	Philadelphia.....	PHL	Kansas.....	Dodge City.....	DDC
	Pittsburgh.....	PIT		Topeka.....	TOP
Virginia.....	Norfolk.....	NGU	Minnesota.....	International Falls.	INL
<i>Region 3</i>				St. Cloud.....	STC
Alabama.....	Montgomery.....	GUN	Nebraska.....	Omaha.....	OFF
Florida.....	Tampa.....	TPA	North Dakota.....	Bismarck.....	BIS
Georgia.....	Athens.....	AHN	South Dakota.....	Rapid City.....	RAP
North Carolina.....	Greensboro.....	GSP	Wyoming.....	Lander.....	LAN
South Carolina.....	Charleston.....	CHS			
Tennessee.....	Nashville.....	BNA			
<i>Region 4</i>			<i>Region 7</i>		
Illinois.....	Chicago.....	MDW	Arizona.....	Tucson.....	TUS
Michigan.....	Detroit.....	MTC	California.....	Los Angeles.....	LGB
	Sault Ste. Marie.....	SSM		Oakland.....	OAK
Missouri.....	Columbia.....	CBI		San Diego.....	SDU
Wisconsin.....	Green Bay.....	GRB	Idaho.....	Boise.....	BOI
<i>Region 5</i>			Montana.....	Great Falls.....	GTF
Arkansas.....	Little Rock.....	LIT	Nevada.....	Las Vegas.....	LAS
Louisiana.....	Burrwood.....	BRJ	Oregon.....	Medford.....	MFR
	Lake Charles.....	LCH		Salem.....	SLE
	Shreveport.....	BAD	Utah.....	Salt Lake City.....	HIF
			Washington.....	Seattle.....	NEJ
				Spokane.....	GEG

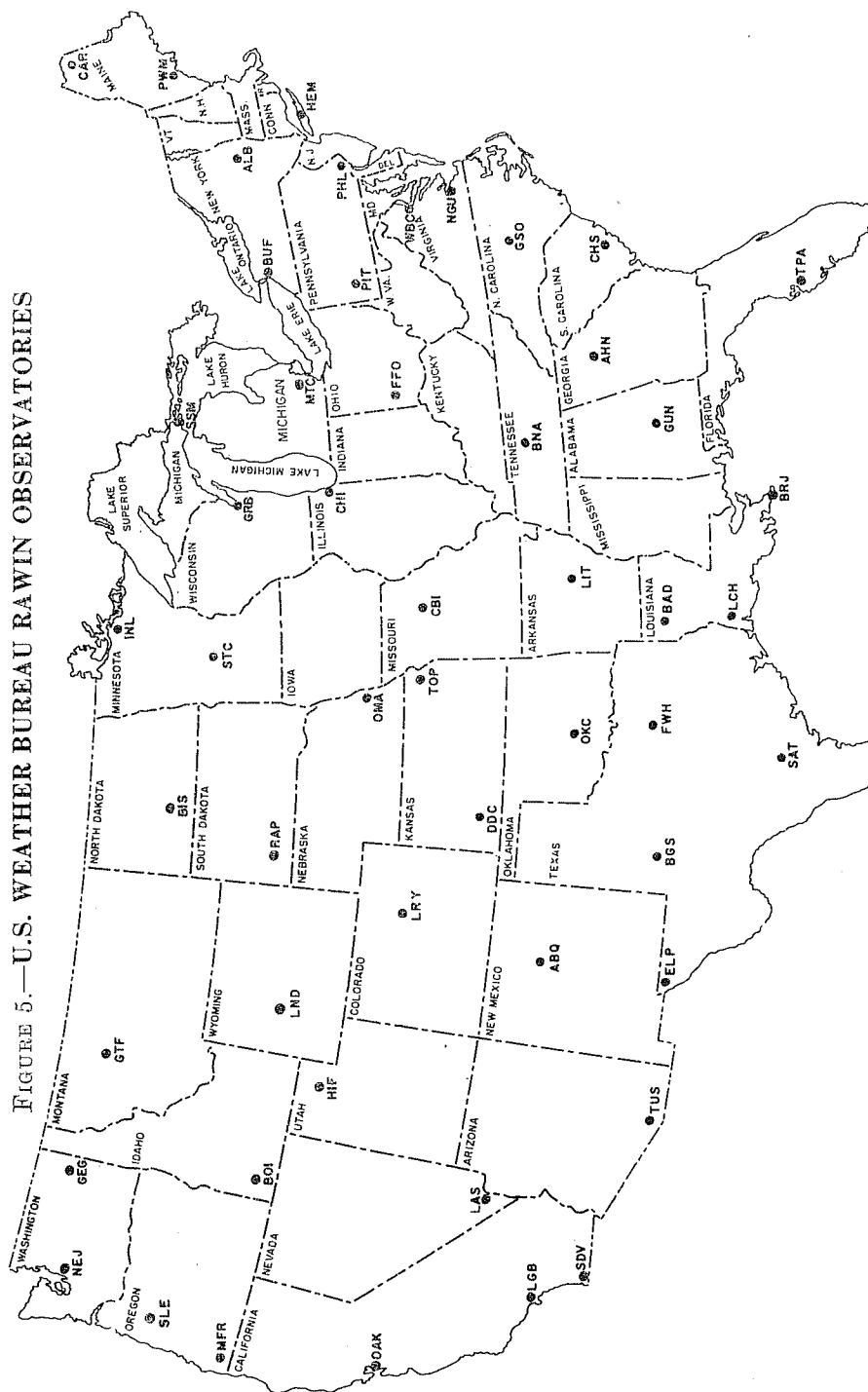
Source: U. S. Weather Bureau.

The twice daily reports from the Rawin Observatories are transmitted over the United States Government Teletype Service "C" to the 222 Weather Bureau offices listed. Civil Defense officials in any locality can obtain readings by calling the Weather Bureau Office in the respective area and, with the technical instructions available, can construct fallout plots for any specified area.

FCDA has advised State and local civil defense offices to obtain the twice daily coded messages covering the area within 500 miles of their respective borders—within 1,000 miles in the winter—and to develop the ability to decode these messages and construct fallout plots. With training, a complete plot can be constructed in less than 5 minutes.



FIGURE 5.—U.S. WEATHER BUREAU RAWIN OBSERVATORIES





## Weather Bureau Stations

## REGION AND STATE

*Region 1*

Connecticut:  
 Bridgeport  
 Hartford  
 New Haven  
 Maine:  
 Caribou  
 Portland  
 Massachusetts:  
 Boston  
 Harvard  
 Nantucket  
 Worcester  
 New Hampshire:  
 Concord  
 New Jersey:  
 Atlantic City  
 Trenton  
 New York:  
 Albany  
 Binghamton  
 Buffalo  
 New York  
 Niagara Falls  
 Rochester  
 Syracuse  
 Rhode Island:  
 Providence  
 Vermont:  
 Burlington

*Region 2*

Delaware:  
 Wilmington  
 District of Columbia:  
 Washington  
 Kentucky:  
 Lexington  
 Louisville  
 Maryland:  
 Baltimore  
 Olney  
 Ohio:  
 Akron  
 Cincinnati  
 Cleveland  
 Columbus  
 Dayton  
 Sandusky  
 Toledo  
 Youngstown  
 Pennsylvania:  
 Allentown  
 Harrisburg  
 Lancaster  
 Philadelphia  
 Pittsburgh  
 Reading  
 Scranton  
 Williamsport  
 Virginia:  
 Lynchburg

## REGION AND STATE

*Region 2—Continued*

Virginia—Continued  
 Norfolk  
 Richmond  
 Roanoke  
 West Virginia:  
 Charleston  
 Huntington  
 Parkersburg

*Region 3*

Alabama:  
 Birmingham  
 Mobile  
 Montgomery  
 Florida:  
 Daytona Beach  
 Fort Myers  
 Jacksonville  
 Key West  
 Lakeland  
 Miami  
 Orlando  
 Pensacola  
 Tallahassee  
 Tampa  
 West Palm Beach  
 Georgia:  
 Atlanta  
 Augusta  
 Macon  
 Rome  
 Savannah  
 Valdosta  
 Thomasville  
 Mississippi:  
 Jackson  
 Meridian  
 Vicksburg  
 North Carolina:  
 Asheville  
 Charlotte  
 Greensboro  
 Raleigh  
 Wilmington  
 Winston-Salem  
 South Carolina:  
 Charleston  
 Columbia  
 Greenville  
 Tennessee:  
 Chattanooga  
 Knoxville  
 Memphis  
 Nashville

*Region 4*

Illinois:  
 Cairo  
 Chicago  
 Moline  
 Peoria  
 Springfield



## REGION AND STATE

*Region 4—Continued*

Indiana :  
 Evansville  
 Fort Wayne  
 Indianapolis  
 South Bend  
 Michigan :  
 Alpena  
 Battle Creek  
 Detroit  
 Escanaba  
 Flint  
 Grand Rapids  
 Lansing  
 Marquette  
 Muskegon  
 Sault Ste. Marie  
 Missouri :  
 Columbia  
 Kansas City  
 Springfield  
 St. Louis  
 Wisconsin :  
 Green Bay  
 LaCrosse  
 Madison  
 Milwaukee

*Region 5*

Arkansas :  
 Fort Smith  
 Little Rock  
 Louisiana :  
 Baton Rouge  
 Burrwood  
 Lake Charles  
 New Orleans  
 Shreveport  
 New Mexico :  
 Albuquerque  
 Roswell  
 Oklahoma :  
 Oklahoma City  
 Tulsa  
 Texas :  
 Abilene  
 Amarillo  
 Austin  
 Brownsville  
 Corpus Christi  
 Dallas  
 Del Rio  
 Denton  
 El Paso  
 Fort Worth  
 Galveston  
 Houston  
 Laredo  
 Lubbock  
 Midland  
 Port Arthur  
 San Angelo  
 San Antonio  
 Victoria  
 Waco  
 Wichita Falls

## REGION AND STATE

*Region 6*

Colorado :  
 Denver  
 Grand Junction  
 Pueblo  
 Iowa :  
 Burlington  
 Des Moines  
 Dubuque  
 Sioux City  
 Waterloo  
 Kansas :  
 Concordia  
 Dodge City  
 Goodland  
 Topeka  
 Wichita  
 Minnesota :  
 Duluth  
 International Falls  
 Minneapolis  
 Rochester  
 St. Cloud  
 Nebraska :  
 Grand Island  
 Lincoln  
 Norfolk  
 North Platte  
 Omaha  
 Scottsbluff  
 Valentine  
 North Dakota :  
 Bismarck  
 Fargo  
 Williston  
 South Dakota :  
 Huron  
 Rapid City  
 Sioux Falls  
 Wyoming :  
 Casper  
 Cheyenne  
 Lander  
 Sheridan

*Region 7*

Arizona :  
 Phoenix  
 Prescott  
 Tucson  
 Winslow  
 Yuma  
 California :  
 Bakersfield  
 Burbank  
 Eureka  
 Fresno  
 Los Angeles  
 Oakland  
 Pomona  
 Red Bluff  
 Sacramento  
 San Diego  
 San Francisco  
 Santa Maria  
 Santa Rosa



## REGION AND STATE

*Region 7—Continued*

Idaho:  
 Boise  
 Lewiston  
 Pocatello  
 Montana:  
 Billings  
 Glasgow  
 Great Falls  
 Havre  
 Helena  
 Missoula  
 Nevada:  
 Elko  
 Ely  
 Las Vegas  
 Reno  
 Winnemucca

## REGION AND STATE

*Region 7—Continued*

Oregon:  
 Astoria  
 Eugene  
 Medford  
 Pendleton  
 Portland  
 Roseburg  
 Salem  
 Utah:  
 Salt Lake City  
 Washington:  
 Olympia  
 Seattle  
 Spokane  
 Walla Walla  
 Yakima

## SURVIVAL PLAN PROGRAM

Twenty-six contracts for developing State and local civil defense operational plans for survival from enemy attack were signed during fiscal year 1956. The contracts covered Critical Target and support areas representing 71.6 percent of the population of the United States.

States and cities participating in the program, financed wholly by Federal funds appropriated to FCDA, were: New York City, Baltimore, Philadelphia, Chicago, Kansas City, Mo., St. Louis, Baton Rouge-Shreveport-Lake Charles, La., New Orleans, Houston, Denver, Minneapolis-St. Paul, Omaha-Lincoln-Council Bluffs, Nebr., Connecticut, Maine, Massachusetts, Rhode Island, District of Columbia, Ohio, Alabama, Florida, North Carolina, Tennessee, Arkansas, Oklahoma, California, and Washington. Generally, contracts signed with these States and cities covered initial stages of the program.

The FCDA survival plan program was started in July 1955, when the 84th Congress made a \$10,000,000 supplemental appropriation available to the agency. Of that amount, \$8,300,000 was allocated to finance survival plan contracts to meet specific survival problems in the various States and cities.

The contracts require that the studies be comprehensive, and include a complete analysis of area population, command and control problems, movement capabilities of traffic and people, shelter availability, reception and care of evacuees, essential resources, and ways and means of educating and informing the public.

In addition to the survival studies, pilot studies on specific problems were conducted in several areas to provide information and techniques



to guide all survival projects. A shelter study of the Milwaukee area to determine shelter requirements and advisable construction was approved in December, and the interim report was received in March. A study of the reception and care problem in the Milwaukee area was started under a contract approved in December 1955. A census study of Milwaukee, Wis., Houston, Tex., Washington, D. C., and St. Louis, Mo., to establish the population pattern was approved in February, and the final report submitted at the end of the year. Manuals covering the findings of this study, *Population Estimates for Survival Planning*, have been published by the Bureau of the Census.

The National Opinion Research Center started a study in Milwaukee aimed at improving techniques of disseminating civil defense information through mass media. The Chicago Research Department of the American Machine & Foundry Co. and Wilbur Smith & Associates conducted studies of resources and shelter requirements against nuclear weapons. A study of road construction needed for civil defense is being made by the United States Department of Commerce. A command and control and training requirements study of Milwaukee was made by John Diebold & Associates, Inc., to determine political jurisdiction, continuity of government, and internal alerting and communications problems.

Federal agencies other than the FCDA have been allocated funds by FCDA to carry out the civil defense program in their fields, and part of this money has been assigned for work under the survival plan program. The agencies that have received funds are: Departments of Agriculture; Commerce; Health, Education, and Welfare; Interior; Justice; Labor; and the Housing and Home Finance Agency.

The FCDA survival projects office published two manuals to assist States and their political subdivisions in developing survival plans. The *Survival Plan Manual*, M27-1, and the *Survival Plan Workbook*, M27-2, define the seven principal survey projects that must be included in the plan. Two technical reports, TR-27-4, *Operation Exit*, a report on the evacuation test exercise in South Bend, Ind., and TR-27-5, *Operation Green Light*, a report based on the evacuation test exercise in Portland, Oreg., were published during the fiscal year.



## State and Local Survival Plan Contracts

Contractor	Date approved	Federal funds	
		Approved	Advanced
Total		\$1, 542, 665	\$1, 098, 800
Region I:			
Connecticut	3/27/56	30, 000	30, 000
Maine	3/20/56	20, 000	20, 000
Massachusetts	4/6/56	25, 000	25, 000
New York, N. Y.	12/17/55	108, 200	108, 200
Rhode Island	2/29/56	23, 500	23, 500
Region II:			
District of Columbia	10/31/55	12, 000	12, 000
Baltimore, Md.	2/6/56	42, 500	42, 500
Ohio	3/20/56	209, 900	209, 900
Philadelphia, Pa.	3/26/56	50, 000	50, 000
Region III:			
Alabama	4/30/56	23, 750	23, 750
Florida	2/28/56	8, 500	8, 500
North Carolina	6/4/56	22, 700	22, 700
Tennessee	4/30/56	37, 175	37, 175
Region IV:			
Chicago, Ill.	1/19/56	49, 000	49, 000
Kansas City, Mo.	5/3/56	25, 465	25, 465
St. Louis, Mo.	2/8/56	41, 580	41, 580
Region V:			
Arkansas	3/9/56	10, 475	10, 475
Baton Rouge - Shreveport - Lake Charles, La.	2/7/56	15, 000	15, 000
New Orleans, La.	11/3/55	25, 500	25, 500
Oklahoma	1/10/56	10, 090	10, 090
Houston, Tex.	11/18/55	192, 257	48, 064
Region VI:			
Denver, Colo.	2/9/56	24, 400	24, 400
Minneapolis-St. Paul, Minn.	3/9/56	20, 731	20, 731
Omaha - Lincoln - Council Bluffs (Iowa), Nebr.	2/29/56	17, 270	17, 270
Region VII:			
California	3/16/56	198, 000	198, 000
Washington	6/15/56	67, 672	

## URBAN ANALYSIS STUDIES

To develop effective local operational plans for civil defense in the event of enemy attack, FCDA, prior to the advent of the survival plan studies, provided guidance and encouraged important target areas to make thorough analyses of items such as the most probable target area, probable damage and casualties, population distribution, industrial installations, communications, transportation systems, evacuation routes, power and water facilities, medical resources, hospitals, schools, jails, zoos, fire-fighting plans, potential assembly areas, feeding and welfare facilities, topography, prevailing winds, possible shelters, and many other items. These are necessarily complex proj-



ects requiring the services and contributions of a large number of people having specific knowledge in the many fields.

A total of 46 areas has undertaken such analyses. As shown below, 12 of the reports have been completed and released. The other 34 are in various stages of completion; 15 are still in the collection-of-data stage; the data are being analyzed in 10 cases; 7 are at the report-preparation stage; and 2—Toledo, Ohio, and Wichita, Kansas,—were reviewing and editing the reports prior to release.

## Studies in Process

### *Collection of data*

Atlanta, Ga.  
Dallas, Tex.  
Fall River, Mass.  
Flint, Mich.  
Kansas City, Mo.-Kansas City,  
Kans.  
Los Angeles, Calif.  
Mobile, Ala.  
Oakland, Calif.  
Ogden, Utah  
Portland, Oreg.  
South Bend, Ind.  
Sheboygan, Wis.  
Topeka, Kans.  
Tulsa, Okla.  
Waco, Tex.

### *Analysis of data*

Cleveland, Ohio  
Detroit, Mich.  
Philadelphia, Pa.

### *Analysis of data—Continued*

Rochester, N. Y.  
Hampton-Newport News, Va.  
Jersey City, N. J.  
Norfolk-Portsmouth, Va.  
Seattle, Wash.  
Shreveport, La.  
Springfield, Mass.

### *Preparation of report*

Akron, Ohio  
Denver, Colo.  
Fort Worth, Tex.  
Lynn, Mass.  
Wilmington, Del.  
Worcester, Mass.  
Youngstown, Ohio

### *Review and editing of report*

Toledo, Ohio  
Wichita, Kans.

NOTE.—All of the above cities are in Critical Target Areas except Mobile, Ala.; Ogden, Utah; Topeka, Kans.; Waco, Tex.; Tulsa, Okla.; Shreveport, La.; and Sheboygan, Wis.

## Reports Released

City	Month released
San Francisco, Calif.....	February 1951
Baltimore, Md.....	March 1951
Washington, D. C.....	June 1951
U. S. Capitol—Supreme Court and Congressional Buildings.	October 1951
Dayton, Ohio.....	November 1951
Boston, Mass.....	February 1953
New Orleans, La.....	November 1953
St. Louis, Mo.....	February 1954
Milwaukee, Wis.....	July 1954
Houston, Tex.....	July 1954
Grand Rapids, Mich.....	June 1955
Columbus, Ohio.....	February 1956



## RESEARCH AND DEVELOPMENT

FCDA is authorized by the Federal Civil Defense Act of 1950 to conduct research and to study and develop civil defense measures designed to protect life and property. Little research is done directly by the FCDA staff. Most of it is carried on as specific research projects under contract with various universities and specialized research organizations. These projects cover a variety of fields such as the testing of materials, weapons effects, development of damage assessment techniques, development of shelters, studies of Natural disaster problems, fire-fighting techniques, population movements, and public opinion surveys.

During fiscal year 1956 the funds obligated by FCDA for these research projects totalled \$1,996,451. A list and brief description of the projects in process as of June 30, 1956, follows.

### Projects in Process

Starting date	Project and contractor	Scheduled completion date	FCDA funds obligated fiscal year 1956
1954 .....	<i>Scientific Advisory Committee.</i> —Established at request of FCDA by the National Academy of Sciences in 1954, this committee, supported by FCDA funds on a continuing basis to advise on a variety of scientific and technical problems. Its members are leading scientists in a variety of fields who serve without pay.	continued .....	\$40,000
April 1952 .....	<i>Chemical Warfare Defense—Chemical Corps, Department of Army Contract.</i> —Development and testing of infant protector and civilian type protective masks.	do .....	87,500
August 1953 .....	<i>Civil Defense Atomic Test Programs.</i> —Parts 2 and 3—Development and execution of a continuing atomic test program as related to civil defense requirements, including observer participation, civil defense trainee participation, and technical tests. Operation Cue, a part of the AEC test series in Nevada in the spring of 1955, was a result of this program. Plans are now being prepared for Part 3 sometime in 1957.	do .....	0
June 1954 .....	<i>Damage Assessment and Reporting—Stanford Research Institute.</i> —A program to develop immediate and specific information on attack damage to population, housing and other facilities, and resources. Emphasis is being placed on mechanization of fallout analysis, development of a computation system for evacuation analysis, and compilation of various data required. Development of computations for bomb damage has been completed. When perfected the system will be important for national planning, postattack operations, and war games.	do .....	200,000
June 1953 .....	<i>Disaster Studies—Committee on Disaster Studies, National Research Council.</i> —Part 1—Field investigations of current peacetime disasters to develop information useful to civil defense in both peacetime and wartime disaster situations.	do .....	0
September 1955 .....	<i>New England Disaster Study—Bureau of Applied Research, Columbia University.</i> —This evacuation study, recommended by the Committee on Disaster Studies of the National Research Council, relates to large-scale evacuation in the New England area, necessitated by the flood situation and with the problems arising from temporary housing and care, and doubling up with relatives or friends.	July 1956 .....	12,000



## Projects in Progress—Continued

Starting date	Project and contractor	Scheduled completion date	FCDA funds obligated fiscal year 1956
November 1955.....	<i>Fire Research Committee—National Academy of Sciences.</i> —The functions of this committee are to explore all means and methods for the prevention, extinguishing, and control of large-scale fires. Emphasis is on new and novel procedures and methods with the objective of recommending a basic research program in this field for implementation by FCDA.	continued.....	30,000
Do.....	<i>Climatological Survey—United States Weather Bureau, Department of Commerce.</i> —A comprehensive climatological study of fallout probabilities. The purpose of the survey is to aid in planning evacuation studies, location of stockpiling sites, and assuring well-founded operational plans. The final report will indicate geographical probabilities of fallout by seasons and areas around target areas in the United States, its Territories, and southern Canada.	August 1956.....	75,000
Do.....	<i>Operational Communications System—Stanford Research Institute.</i> —The objectives of this research are to provide an attack surveillance system to communicate information on such factors as location of ground zero, weapons size, and height of burst, to a computer center which will be an integral part of the damage assessment system. The first phase will concentrate on systems analysis, preliminary specifications for surveillance instrumentation, requirements for communications network, and establishing the cost of an operating system.	November 1956.....	300,000
Do.....	<i>Medical Research—National Academy of Sciences:</i> a. <i>Blood Research.</i> —Funds for this project have been transferred to the Department of Defense to support a continuing contract relating to blood research, plasma, volume expanders, and nasogastric feedings.	Continued.....	15,000
December 1955.....	b. <i>Plasma Sterilization.</i> —A direct contract authorizes a project on the sterilization of blood plasma for the elimination of the transmission of jaundice.	.....do.....	38,125
January 1956.....	<i>Public Attitude Survey—Survey Research Center of the University of Michigan.</i> —A field survey to show current public thinking with regard to various civil defense topics. This will bring a 1954 study up to date.	December 1956.....	69,00
Do.....	<i>Shelter Research—Ionizing Radiation—National Bureau of Standards, Department of Commerce.</i> —One of the larger initial undertakings will be a study of the attenuation of nuclear radiation by structures.	Continued.....	16,500
June 1956.....	<i>Shelter Design—American Machine &amp; Foundry Co.</i> —Design of a 150-foot span reinforced-concrete dome-type shelter with the capacity to house about 3,000 persons for several days or longer.	December 1956.....	35,630
February 1956.....	<i>Public Communications System—Audio-sound System—Dukane Corp.:</i> (1) Development of four prototype model transistor amplifiers for the wire line control system for mobile, portable, and fixed applications. The objectives are to reduce the weight and power supply requirements to simplify maintenance, to increase the life expectancy, to increase portability, and to reduce cost of civil defense public address units. (2) Development of specifications for a light-weight portable public address system suitable for light aircraft. Also recommendations for equipment usage at various altitudes and ground conditions; development of speech techniques for best intelligibility; and development of service usage techniques in civil defense situations.	July 1956.....	89,750



## Projects in Progress—Continued

Starting date	Project and contractor	Scheduled completion date	FCDA funds obligated fiscal year 1956
February 1956.....	<i>Public Communications System</i> —Continued. (3) An engineering survey and application of wire line control system in Gary, Ind., using presently available and commercially produced sound equipment. To provide technical guidance to cities and States relative to the installation of equipment presently available.		
December 1955.....	<i>Home Warning Devices:</i> <i>A. Superimposed Powerline Signal Systems:</i> 1. <i>Powerline Harmonic System</i> —Midwest Research Institute.—Research on a voltage reduction signal system to be used on electric power distribution systems. The original voltage dip method has been found to have technical and practical difficulties. Eight different types of signals have been explored. The original scope of the contract has been revised and extended, and present emphasis is on a harmonic voltage system.	October 1956.....	49, 883
April 1956.....	2. <i>Overall Investigation</i> —Armour Research Foundation.—An overall study of powerline warning systems making use of superimposed signals over a wide range of frequencies. It will cover the general properties of warning systems and the generation and transmission of the warning signal. It will include comparative study of home warning devices presently developed or being considered, as well as the preliminary design of a warning system based on the optimum superimposed signal.	do.....	39, 557
Do.....	3. <i>Prototype 2000 Cps. System</i> —International Business Machines Corp.—Development of an internal warning system for the purpose of generating and receiving a civil defense alert signal. The contractor will furnish FCDA with receivers and necessary transmitting equipment for installation.	do.....	39, 289
May 1956.....	4. <i>Hom-A-Lert System</i> —Allis-Chalmers Co.—Development, production, and testing of an internal warning system including generating equipment, wave-trap equipment, and signal receivers to be installed and tested in Cincinnati.	September 1956.....	47, 276
Do.....	<i>B. Telephone Signalling System</i> —Armour Research Foundation.—Development of a warning system based on telephone system signalling. It will include an analysis of the switching techniques used by Bell and independent telephone companies, study of methods of communicating an alarm to telephone system subscribers, and development of a prototype alarm system to be installed in a typical telephone central office.	February 1957.....	24, 918
June 1956.....	<i>C. Prototype CONELRAD Alert Receivers</i> —Philco Corp.—Development of three prototype radio receivers actuated by various sequences based on CONELRAD Alert procedures. The contract seeks to develop a simple, low-cost alarm receiver for use by the public.	October 1956.....	9, 850



## Projects in Process—Continued

Starting date	Project and contractor	Scheduled completion date	FCDA funds obligated fiscal year 1956
March 1956.....	<p><i>Warning and Communications Systems Studies:</i></p> <p><i>A. Overall Communications Study—Melpar Corp.</i>—A study program of civil defense communications in that period between the warning and the delivery of the weapons with particular emphasis on the requirements of survival procedures.</p> <p>(1) A survey of alarm communications from and including the key points down to the citizen to be warned. Recommendations will be made for the design of an optimum alarm communications system based on economic, engineering, and political factors.</p> <p>(2) An evaluation of the existing CON-ELRAD system with recommendations for improvement or better alternative procedures if CON-ELRAD is found inadequate.</p> <p>(3) A survey of the entire civil defense communications problem from the first alert down to the public, broadcasting of intelligence and instructions before and after attack, establishing and maintaining coordination between civil defense leaders and workers, and communications among civilians after an attack.</p>	March 1957.....	49, 145
April 1956.....	<p><i>B. Warning Study, by Specific States—Gaulney &amp; Jones Co.</i>—A study of the effectiveness of the existing facilities from the Air Division through the key points down to the local level, to be conducted in Maryland and Pennsylvania.</p>	November 1956.....	33, 500
March 1956.....	<p><i>Radiological Defense System—University of California.</i>—A study aimed at the development of a National Radiological Defense System. Will include intensive fact-finding, review, analysis, recommendations or further research on such items as: fallout patterns and predictions; shelter-cover; radiological instrumentation; communications systems; mass radiation injury diagnosis and treatment; and ingestion hazards.</p>	March 1957 but will continue.	591, 600
June 1956.....	<p><i>Public Education and Training:</i></p> <p><i>A. Local Civil Defense Organization Effectiveness—Political Science Department of the Michigan State University.</i>—A comparative study of types of civil defense organizations currently operative in States, cities, counties, and metropolitan target complexes. The following aspects will be analyzed: formal organization of the specific agency, its external relations with other organizations, its internal relations, and its community relations. Training materials will be prepared, jurisdictional problems will be pointed out, the factors associated with effective civil defense programs will be specified.</p>	November 1956.....	33, 944
May 1956.....	<p><i>B. Evaluation of Local Civil Defense Training Effectiveness—Applied Psychological Services, Villanova, Pa.</i>—Development of the means and instruments for the evaluation of the effectiveness of civil defense train-</p>	February 1957 .....	24, 084



## Projects in Process—Continued

Starting date	Project and contractor	Scheduled completion date	FCDA funds obligated fiscal year 1956
June 1956.....	<p><i>Public Education and Training—Continued.</i> ing at various levels. For use by all levels of civil defense organizations.</p> <p><i>C. Effectiveness of Civil Defense Information Media—Group Attitudes, Inc., New York, N. Y.</i>—Interviews with key local civil defense personnel, and with selected influence groups to determine their evaluation of the effectiveness of civil defense public information media, news releases, radio, TV, etc. Analysis of interview results is intended to develop the "what" and "why" of the effectiveness of the various media used by FCDA.</p>	November 1956.....	39,000

## NATURAL DISASTERS

Nearly \$22 million was allocated to the States as Federal assistance in 26 major natural disasters during fiscal year 1956. Since enactment of Public Law 875, on September 30, 1950, the Congress has appropriated more than \$84 million for Federal disaster assistance, and the President has authorized a net allocation of more than \$64 million in disaster funds. A total of \$34,500,000 was made available by the 84th Congress for disaster purposes.

In Executive Order 10427 dated January 16, 1953, the President conferred authority upon FCDA to direct and coordinate Federal assistance in major natural disasters as set forth in Public Law 875.

From the time responsibility for natural disaster operations was assigned to FCDA until the natural disaster office was established, operations were directed by a small staff that reported directly to the assistant administrator, operations control services.

After the northeast and west coast floods in the fall of 1955 and early 1956, it was recognized that additional staff was necessary. A separate disaster office therefore was established by the Administrator of FCDA.

Approval by FCDA Administrator Val Peterson of General Order 232, on February 16, 1956, established a natural disaster office at the National Headquarters of the Federal Civil Defense Administration, Battle Creek, Mich. The order also outlined the functions of the office in fulfilling the responsibility of FCDA for direction, coordination, and control of Federal assistance to State and local governments in areas of major natural disasters.

The natural disaster office is headed by a director, who reports to the assistant administrator, operations control services, FCDA.



A nucleus staff of disaster specialists is assigned permanently to the Office, and in natural disaster emergencies personnel from other offices and services of FCDA National Headquarters are called upon, as the need requires, to assist the regular staff.

General Order 232 states that, "The Natural Disaster Office will \* \* \* provide technical advice and guidance on natural disaster operations to other Federal agencies, FCDA Regional Offices, local (including State) political subdivisions, and nongovernmental groups \* \* \*." Detailed functions are then outlined.

Specialists who may be assigned to natural disaster duty include those in the following fields: communications, meteorology, supply, transportation, audit, engineering, medical, welfare, industrial protection, safety, public information, planning, and law.

Since establishment of the office, much effort has been directed toward further simplifying procedures for setting Federal disaster assistance in motion—quickly, and without duplication of Federal effort.

### **Major Natural Disasters, Fiscal Year 1956**

The two most damaging natural disasters during fiscal year 1956 were hurricane and floods that struck the east coast in August, 1955; and floods in California in December of 1955. Welfare needs were probably the highest in the history of the Nation. Industry and transportation were paralyzed; power and communications cut off; and thousands of persons were homeless and in want.

An indication of the scope of Federal disaster relief activities may be seen in the fact that Federal agencies involved in the floods of August 1955 included FCDA; the Department of Agriculture's Agricultural Marketing Service, and Farmers Home Administration; the Department of Commerce's Bureau of Public Roads, and Maritime Administration; the Army Corps of Engineers; the Department of Health, Education, and Welfare's Public Health Service, and Food and Drug Administration; the Housing and Home Finance Agency's Public Housing Administration, Federal Housing Administration, and Federal National Mortgage Association; the Department of Labor; the Small Business Administration; the Department of the Treasury, and the Department's Coast Guard, and the Internal Revenue Service; the Office of Defense Mobilization; and the General Services Administration.

In the floods in California in December 1955, FCDA set up Inter-agency Centers at strategic points in the disaster areas to coordinate Federal disaster relief. Twenty-three Federal agencies and the American National Red Cross were represented at the Interagency Centers.



## MAJOR NATURAL DISASTERS, FISCAL YEAR 1956

Date of declaration	Area	Nature of disaster	Presidential allocation
Aug. 13	North Carolina	Hurricane	\$3, 271, 000
15	New Mexico	Flood	120, 360
20	Pennsylvania	Hurricane and flood	1, 020, 000
20	Connecticut	do	1, 020, 000
20	Massachusetts	do	1, 020, 000
20	New Jersey	do	1, 020, 000
20	Rhode Island	do	1, 020, 000
20	South Carolina	Hurricane	408, 000
22	New York	Hurricane and flood	510, 000
Dec. 22	Alaska	Severe hardship	25, 500
23	California	Flood	9, 735, 000
24	Nevada	do	378, 600
29	Oregon	do	1, 384, 000
Feb. 25	Washington	do	257, 500
Mar. 15	Pennsylvania	do	51, 500
29	New York	do	51, 500
Apr. 7	Michigan	Tornado	139, 050
7	Oklahoma	do	66, 950
9	Tennessee	do	
18	Alabama	do	
21	Idaho	Threatened flood	206, 000
24	North Carolina	Severe storm	206, 000
May 17	Ohio	Windstorm	
21	Pennsylvania	Storm	
June 12	Colorado	Flood	51, 500
23	Missouri	Water shortage	
Total			137, 410, 205

<sup>1</sup> The Army Corps of Engineers expended \$31,600,000 for disaster assistance in the New England floods of 1955, under direction of FCDA Disaster Order No. 1. The amount was to be refunded later by Congressional appropriation direct to the Corps.

The natural disaster office organized and distributed to the field an interim administrative manual that details the types of Federal assistance available to State and local governments in time of major natural disaster; the manner in which to secure such assistance; rules, regulations, and procedures of FCDA governing the assistance available; and other pertinent information. The manual was prepared in loose-leaf form for easy revision.

Technical personnel of the natural disaster office and instructors of the FCDA Staff College cooperated in developing a 5-day course to inform and train persons regarding Federal assistance available in time of natural disaster. One 3-day course for selected FCDA personnel was given at the National Headquarters of the Federal Civil Defense Administration, at Battle Creek, Mich., in June. The expanded 5-day course will be presented to the public for the first time in November 1956.

A report was prepared during the fiscal year by the Natural Disaster Office for use by FCDA Administrator Val Peterson in support of proposed Federal legislation to provide flood insurance. The 84th







Congress later enacted Public Law 1016, known as the Federal Flood Insurance Act of 1956. Besides providing protection from flood loss, the law requires a study and report on insurance needs against other natural disaster perils.

## **State Authorization for Civil Defense Action in Natural Disasters**

During the fiscal year, FCDA continued to recommend that State civil defense agencies be given the authority to coordinate natural disaster activities within a State. The goal has nearly been reached. Most States have already taken such action; others have set up separate authority for enemy-caused and natural disasters; and still others have emergency authority vested in an existing government department.

The map (fig. 6) shows the States in which civil defense forces are authorized by State law to take action in natural disasters. By the end of the fiscal year, 39 States, the District of Columbia, and five Territories or possessions had enacted legislation authorizing civil defense forces to act in time of natural disaster. Of the nine remaining States, such legislation was pending in Delaware, Missouri, Tennessee, and Vermont.

Work in natural disasters has provided excellent training for civil defense personnel in leadership, organization, and use of technical skills. And on the other hand, civil defense organization and training has increased the capability of personnel to give effective assistance in natural disasters.

## **DELEGATIONS PROGRAM**

The Federal Civil Defense Act of 1950 authorizes the FCDA Administrator to "delegate, with the approval of the President, to the several departments and agencies of the Federal Government appropriate civil defense responsibilities, and review and coordinate the civil defense activities of the departments and agencies with each other and with the activities of the States and neighboring countries." Under this authority the Administrator has issued four delegations, as follows:

Delegation No. 1, approved by the President July 14, 1954, delegated to the Secretary of Health, Education, and Welfare 10 specific duties dealing principally with health and welfare problems under attack conditions, development of civil defense training materials for incorporation in the curricula of schools and colleges, and the development of shelter and protective measures for educational institutions, hospitals, and other health facilities.



Delegation No. 2, approved September 8, 1954, assigned duties to several agencies:

To the Secretary of Agriculture were delegated three responsibilities dealing with control or eradication of diseases, pests, or chemicals used in biological or chemical warfare against animals or crops, the planning of emergency food supplies, and the prevention and control of fires caused by enemy attack in rural areas.

To the Secretary of Commerce were delegated responsibilities for designation of civil defense emergency highways, coordination of interstate and State civil defense highway systems, emergency clearance and restoration of highways, streets, and bridges in damaged areas, traffic control problems during an emergency, and the provision of data and assistance to the States in analyzing potential target and support areas.

To the Secretary of Labor were delegated responsibilities for planning emergency use of the labor force, estimating survivors by occupational and social characteristics, coordination of the nationwide employment service offices for determining manpower requirements and for recruiting purposes, developing methods of compensation for authorized workers in an emergency, the provision of compensation payments for the injury or death of authorized workers during an emergency, and a plan for provision of temporary aid to workers during periods of idleness resulting from enemy action.

The Attorney General was given a delegation for guiding the States in the protection of penal institutions and the control and utilization of prisoners and facilities during an emergency.

To the Housing and Home Finance Administrator were delegated responsibilities for developing protective standards for new housing and temporary shelter in existing housing, provision of temporary emergency housing in support of attacked areas, and plans for the emergency restoration of housing and community facilities coming under the agency's jurisdiction.

Delegation No. 3, approved August 13, 1955, gave further responsibilities to the Secretary of Commerce, namely, the planning of needed highway improvements to meet civil defense requirements, and the development and current issuance of improved forecasts of radiological fallout patterns. This delegation also gave to the Secretary of the Interior the task of planning and providing adequate fuel supplies to attacked areas and reception centers.

Delegation No. 4, approved by the President November 22, 1955, gave to the Secretary of the Interior the responsibility for emergency restoration of electric utility service to attacked areas and the provision of adequate electric utility service to support areas.



As of June 30, 1956, most of the agencies had made progress toward carrying out their delegated responsibilities, but progress was limited in some cases due to the lack of funds.

The delegate agencies obligated a total of \$1,478,680 for these civil defense programs in fiscal year 1956. The agencies requested a total of \$6,656,000 for these functions in fiscal year 1957 and Congress appropriated \$4,000,000. Funds available for fiscal year 1957 were allocated to the various agencies as shown in the table, Civil Defense Funds of Delegate Agencies.

### Program Progress

Agency	Delegation	Progress
DEPARTMENT OF AGRICULTURE	<i>Agricultural Research Service</i>	
	Plan a national program and direct Federal activities concerned with research, diagnosis, strengthening of defensive barriers, and control or eradication of diseases, pests, or chemicals introduced as agents of biological or chemical warfare against animals and crops.	<p>A series of 2-day meetings were held in various States with veterinarians, livestock sanitary officials, college veterinary faculties and others on the recognition and handling of foreign animal diseases including emergency plans for coping with outbreaks.</p> <p>A total of 107 regional meetings have been held on disease problems and control programs.</p> <p>Work is progressing on developing new diagnostic techniques and improving performance and control procedures.</p>
	<i>Agricultural Marketing Service and Commodity Stabilization Service</i>	
	Plan and direct Federal activities, and provide technical guidance to States, in connection with an overall food program aimed at maintaining adequate emergency food supplies for attack or support areas.	<p>A guidebook for food processing and distributing establishments presenting factors for reducing vulnerability of industrial food plants has been developed and is being distributed for comment to trade associations and other industry representatives.</p> <p>A proposed set of guidelines for determining food and food facility resources in reception areas is being developed.</p> <p>A draft of an order prescribing the general rules of a good priority system has been developed and is being reviewed.</p> <p>Development of a course in radiological training for inspection personnel to assist in identifying radioactive foods and processing equipment is being studied.</p> <p>Emergency processing storage and distribution methods are being studied.</p>
	<i>Forest Service</i>	
	Plan a national program, direct Federal activities, and provide technical guidance to States concerned with the prevention and control of fire caused by enemy attack in rural areas of the United States.	<p>State committees for Rural Fire Defense planning have been established, assignments have been made, and the inventory, operating procedure, and correlation phases of plans have been partially completed for the wild lands.</p> <p>Plans are being made to establish regional level (CD) rural fire defense committees. One civil defense regional meeting on fire defense planning has been held and two more are scheduled.</p> <p>Supplemental guidelines containing new principles and schedules have been developed by the National Rural Fire Defense Committee as an aid to regional and State committees.</p>



## Program Progress—Continued

Agency	Delegation	Progress
DEPARTMENT OF COMMERCE	<p style="text-align: center;"><i>Bureau of Public Roads</i></p> <p>Provide advice and guidance to State highway departments in the designation of State civil defense emergency highway routes.</p> <p>Coordinate interstate and State designated civil defense highway systems to assure uniformity of designation for civil defense emergency purposes.</p> <p>Plan a national program; develop technical guidance for States, and direct Federal activities concerning emergency clearance and restoration of highways, streets, and bridges in damaged areas.</p> <p>Provide technical guidance to States concerning highway traffic control problems which may be created during a civil defense emergency.</p> <p>Determine and evaluate, with the cooperation of the States, counties, and cities, and assist in the planning needs for highway improvement to meet civil defense requirements.</p>	<p>A revised draft of the preliminary report on civil defense highway needs has been completed and is being reviewed.</p> <p>A standard design for evacuation route signs was recommended.</p> <p>A manual has been prepared discussing techniques to be used in evacuation planning and full utilization of highway systems in an emergency.</p> <p>Official civil defense program assistance has been established in the Commissioner's office.</p> <p>A conference has been held for orientation and instruction required to determine the highway needs for evacuation.</p>
	<p style="text-align: center;"><i>U. S. Weather Bureau</i></p> <p>Prepare an analysis of past data, conduct research, and develop techniques and capabilities leading to improved forecasts of radiological fallout patterns.</p> <p>Prepare and issue currently, as well as in an emergency, forecasts and estimates of areas likely to be covered by fallout as a result of enemy attack. Such information is to be made available to Federal, State, and local civil defense authorities for public information.</p>	<p>Since June 1955 coded fallout messages have been transmitted twice daily on teletypewriter circuits. When decoded and plotted, these yield fallout bulletins for 52 locations covering the entire country. The 500 drops on the circuit insure messages being available to all required officials and industrial groups. A simplified coding procedure was put into effect so that local civil defense personnel could decode the forecasts with accuracy.</p> <p>Arrangements have been concluded with the Canadian Government to provide the same information in twice daily forecasts from eight locations in southern Canada. Honolulu and Alaska also report daily fallout forecasts.</p> <p>Work continued on the establishment of a fallout standard. Tabulation and analysis of data has been completed. Working up trajectories of particles from these is now in progress.</p> <p>A survey was conducted by the Weather Bureau Central Office to determine the use being made of the fallout messages. Tabulated results have been given to FCDA National and regional offices.</p> <p>Experimental work in the use of an analogue computer to produce fallout forecasts is being done.</p> <p>Full time meteorologists have been assigned to FCDA National and regional offices.</p> <p>A brief study of the reliability of persistence assumptions in fallout predictions for a summer and winter situation has been made.</p> <p>Templates from mean wind charts for extrapolating soundings to accommodate the UF network have been prepared for winter and spring conditions. The remaining ones are being prepared.</p>
	<p style="text-align: center;"><i>Area Development</i></p> <p>Provide data and assist the States in conducting analyses of potential target and support areas for the purpose of providing basic statistics and maps essential to the completion of Federal, State, and local civil defense operating plans.</p>	<p>Nothing has been done due to lack of funds.</p>



## Program Progress—Continued

Agency	Delegation	Progress
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE	<p>Plan a national program, develop technical guidance for States, and direct Federal activities concerned with financial assistance for the temporary relief or aid of civilians injured or in want as the result of attack.</p> <p>Plan, program, and develop technical guidance for the States and direct Federal activities concerned with the acquisition, transportation, and payment for clothing of civilians in want as a result of attack.</p> <p>Plan a national program, develop technical guidance for States, and direct Federal civil defense activities concerned with research with respect to, and detection, identification, and control of: (1) communicable diseases in humans, (2) biological warfare against humans, (3) chemical warfare against humans, and (4) other public health hazards.</p> <p>Plan, develop, and direct Federal activities concerned with a national program designed to provide Public Health Service reserve professional personnel from support areas to those damaged by enemy attack.</p> <p>Plan, develop, and distribute through appropriate channels, training materials for incorporation in the curricula of schools and colleges throughout the United States in order to integrate the teaching, in all possible courses, of civil defense skills, and knowledge and fundamentals of behavior during emergencies.</p> <p>Plan, develop, and distribute, through appropriate channels, technical guidance concerning the provision of shelter and other protective measures designed to minimize injury to personnel and reduce damage to vital components of educational institutions and hospitals and of water, sewer, and other public health facilities.</p> <p>Plan a national program, develop technical guidance for States, and direct Federal activities concerned with the emergency restoration of community facilities essential to health or functional components thereof for which the Public Health Service normally has regular operating programs.</p> <p>Plan a national program, conduct research, develop technical guidance for States, and direct Federal activities designed to meet the extraordinary needs for food and drug inspection and control in attacked areas.</p> <p>During a civil defense emergency, employ temporarily additional personnel without regard to the civil service laws and incur such obligations on behalf of the United States as may be required to meet the civil defense requirements of an attack or of an anticipated attack.</p> <p>Disseminate such civil defense information as may be approved from time to time by the Federal Civil Defense Administration.</p>	<p style="text-align: center;"><i>Public Health Service</i></p> <p>Projects on the rapid identification of biological warfare agents are under way. A report summarizing available information on potential chemical warfare agents is being prepared.</p> <p>Data on public water supply facilities developed in the bomb damage assessment studies were forwarded to PCDA.</p> <p>Ten nationally known waterworks experts have been appointed consultants to PHS to advise on the essential municipal water supplies in defense emergency and natural disaster.</p> <p>Training courses on public health in civil defense have been given in Pennsylvania, Maryland, Texas, Oklahoma, Massachusetts, Virginia, Maine, Washington, and Louisiana.</p> <p>A course entitled "The Role of the Public Health Laboratory in Civil Defense" was given to a group of key laboratory personnel from 8 States.</p> <p>Staff members participated in many courses, meetings, and conferences for the purpose of presenting material on the various aspects of civil defense.</p> <p>The strength of the Commissioned Reserve Pool of Professional Personnel was 2,263 on Mar. 31.</p> <p>Fifty commissioned reserve officers attended the fourth headquarters course on "Public Health Activities in National Emergencies."</p> <p>A course on "Epidemiology in Civil Defense" has been developed for presentation to commissioned reserve physicians.</p> <p>Three sanitary engineer officers were given orientation and training and assigned to full-time civil defense work in DHEW. Regions III, IV, and IX.</p> <p>An emergency operations plan and a natural disaster relief operations plan are being prepared.</p> <p>Courses, lectures, and training materials for "Sanitary Engineering Problems in CD Disaster" have been prepared and used in a pilot course conducted at the Sanitary Engineering Center. It was also given in Salt Lake City, Utah.</p> <p>Plans are being developed to assist deans of the medical schools in solving civil defense problems.</p> <p style="text-align: center;"><i>Social Security Administration (Bureau of Public Assistance)</i></p> <p>Considerable time has been spent in discussing and defining major policy fields falling under the Department's delegations.</p> <p>A manual for instruction and guidance is being prepared. A condensed version of policies and procedures to be included in it has been released to the States.</p> <p>A committee on emergency clothing, representing leaders in the retail clothing field, professional associations and Federal agencies, has been selected and is scheduled to meet in the fall.</p> <p>Material for estimates of clothing resources in the Milwaukee Area was prepared and a method for estimating these resources has been worked out.</p> <p>Material for a special FCDA Staff College welfare course has been developed.</p>



## Program Progress—Continued

Agency	Delegation	Progress
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE—Con.		<p><i>Social Security Administration—Con.</i></p> <p>Extensive work has been done to encourage the participation of national private agencies and professional associations in planning for the delegated programs, including the appointment of a temporary consultant to deal exclusively with the matter.</p> <p>Agreements with the States are being signed which will form a basis for the planning of the emergency financial assistance and clothing programs and will provide authority for them to operate in an emergency.</p> <p>A memo of understanding has been drawn up and widely distributed covering:</p> <ol style="list-style-type: none"> <li>a. The payment of financial assistance during an emergency is 100 percent Federal responsibility.</li> <li>b. State Public Welfare Offices will be the focal point around which delegated welfare functions will take place.</li> <li>c. BPA will work with State Public Welfare Departments.</li> </ol> <p>Defense welfare planning material has been received from 46 States.</p> <p>Tentative criteria and cost tables have been so developed for a 50-50 matching with the States on administrative costs for planning defense warfare services.</p> <p><i>Office of Education</i></p> <p>Civil defense pilot project centers have been established by agreements with California, Connecticut, and Michigan State departments of education to work out methods and material for introducing civil defense instruction into the curriculum. Requests have been received from each of the centers for the continuation of the pilot projects in 1957, with emphasis on general adult education.</p> <p>A publication, <i>Education for National Survival</i>, incorporating the best features of bulletins of the three State pilot project centers, was being printed at the end of the fiscal year. It will be distributed nationally through regular educational channels.</p> <p>A total of 46 States and 6 Territories have established civil defense coordinators in their respective departments of education to work with local schools in developing and coordinating civil defense educational progress.</p> <p>Information sheets have been developed specifically for educators based on civil defense technical information; 36 have been published to date.</p> <p><i>Food and Drug Administration</i></p> <p>The preliminary report on tests of food at Nevada has been published. The final report has been declassified and is being printed.</p> <p>Reports on the extent of penetration of bacterial agents into foods in wholesale containers and on gaseous decontamination of small lots of critical foods and drugs have been completed.</p> <p>FDA training program for State and local food and drug officials has reached 53 cities and more than 1,600 people have received certificates of attendance.</p> <p>Work is in progress on a revision of the training handbook, <i>Civil Defense Information for Food and Drug Officials</i>, to include new material and improvements suggested by experience.</p>



## Program Progress—Continued

Agency	Delegation	Progress
DEPARTMENT OF THE INTERIOR	<i>Office of Minerals Mobilization</i>	
	Plan and direct Federal activities designed to procure, store, transport, and distribute adequate fuel supplies to attacked areas and reception centers, consistent with the national emergency fuel program.	Conferences were held with State Civil Defense Directors in three States and detailed plans of operations developed to integrate the national program of fuels distribution into the local organizational setup. Plans are being developed for establishing regional and local area distribution managers for fuel. Initial contact with industry representatives and coordination meetings with some regional administrators have been arranged.
	<i>Office of Oil and Gas</i>	
	Same as above.	A preliminary survey of five FCDA regions and a representative group of States was undertaken to determine what was being done to cope with petroleum and gas problems in a civil defense emergency.
	<i>Assistant Secretary for Water and Power Development</i>	
	Plan a national program, provide technical guidance to the States, and direct Federal activities concerned with the emergency restoration of electric utility service to attacked areas and provision of adequate electric utility service to support areas.	Meetings have been held in 14 sections of the country to enlist cooperation and support of the utilities. All of the United States was covered.
DEPARTMENT OF JUSTICE	Provide technical guidance to States concerning the protection of penal institutions and the control and utilization of prisoners and facilities during a civil defense emergency.	No report.
DEPARTMENT OF LABOR	<i>Activity No. 1</i>	
	Plan and develop a national program relating to the utilization of the labor force during a civil defense emergency, consistent with the responsibilities of the Department of Labor with respect to manpower mobilization.	A regional conference on manpower and postattack mobilization was held in Boston, covering Maine, New Hampshire, Vermont, Rhode Island, Massachusetts, and Connecticut. A plan for the organizing and training of a task force trained in civil defense skills so that they can quickly be shifted to civil defense jobs in an emergency has been drafted and is being discussed. Pilot operations will be undertaken. Identification and description of key skills needed for civil defense is being undertaken with New York State civil defense.
	<i>Activity No. 2</i>	
	Conduct research and provide a method of estimating survivors by occupational and social characteristics, and for determining their availability for employment during a civil defense emergency.	Work has been started to determine and provide the basic data on population and work force characteristics for use in the electronic damage assessment system. Rough outlines of the types of information to be collected on the spot in a post-attack period have been developed.
	<i>Activity No. 3</i>	
	Provide technical guidance to the States and direct Federal activities concerned with coordination of the nationwide system of employment service offices for determining requirements of, and recruiting, referring, and utilizing workers to meet civil defense needs.	All field offices have received interim instructions and procedures to follow in an emergency. Some elements of these procedures have been tested in practice exercises and flood disasters. Planning is in progress to develop coordinated technical guidance for State employment service emergency activities. Standards on defense manpower plans are being developed for inclusion in agreements between State employment services and State civil defense agencies. A study of the New York State civil defense program is under way to determine its suitability for developing standards for other State agencies in setting up necessary organization and occupational structures for emergency recruitment, selection, referral, and allotment of man-



## Program Progress—Continued

Agency	Delegation	Progress
DEPARTMENT OF LABOR—continued	<i>Activity No. 4</i>  Plan a national program, develop technical guidance for the States, and direct Federal activities concerned with the methods of compensation for authorized workers in a civil defense emergency, with the provision of compensation payments for the injury or death of authorized workers while engaged in civil defense activities, and with financial assistance for temporary aid to members of the labor force during periods of idleness due to destruction of working places through enemy action.	
HOUSING AND HOME FINANCE	Drafts of plans covering each of these three problems have been prepared and discussed with the Labor Advisory Committee on Civil Defense.  Conduct research and provide technical guidance to the States concerning protective standards for new housing construction and temporary shelter in existing housing facilities. Plan a national program, provide technical guidance to the States, and direct Federal activities concerned with the provision of temporary emergency housing in support of areas subjected to enemy attack, and with the emergency restoration of essential housing and those related community facilities damaged by enemy action for which the agency normally has legal responsibility.	
	Defense planning committees have been appointed in each constituent agency and unit, as recommended by the HHFA Defense Council. The effects of the nuclear explosion at Nevada in 1955 on residential structures exposed are being studied. Proposals have been submitted for nuclear tests of dwelling units.	

## Civil Defense Funds of Delegate Agencies

Delegate agency	Amount of funds		
	Transferred by FCDA for fiscal year 1956	Obligated during fiscal year 1956	Transferred by FCDA for fiscal year 1957
Department of Agriculture.....			\$325, 000
Department of Commerce.....	\$190, 000	\$163, 813	555, 000
Department of Health, Education, and Welfare.....	1, 240, 000	1, 214, 794	2, 340, 000
Department of the Interior.....	20, 000	10, 328	70, 000
Department of Justice.....			60, 000
Department of Labor.....	65, 000	64, 252	300, 000
Housing and Home Finance.....	25, 000	24, 853	350, 000
Total.....	1, 540, 000	1, 478, 040	4, 000, 000

## WOMEN'S ACTIVITIES

Throughout the year FCDA continued to establish contacts and working programs with over 100 women's organizations representing a total membership of 27,000,000 American women.

Some of their activities in fiscal year 1956 follow:

Regional directors of women's activities held a 3-day conference at FCDA headquarters in July, to discuss the work pattern for the year.



The national essay contest sponsored by the Veterans of Foreign Wars Auxiliary, in which over 30,000 high school students throughout the Nation wrote on the subject "What Civil Defense Means to Me," was completed in September.

A food writers' conference was held at FCDA Headquarters in October and a special emergency mass feeding demonstration was put on by Region IV for those in attendance. Many newspaper articles on emergency feeding and emergency food supplies resulted from this conference.

The American National Red Cross continued its cooperation with FCDA in providing civil defense training programs for women. New courses on home care of the sick and injured were developed and a manual on emergency feeding, jointly sponsored by FCDA and Red Cross, was prepared for publication in 1957. FCDA distributed 10,000 booklets on disaster, which were supplied by the American National Red Cross, and featured a speech by Mr. Ellsworth Bunker, president of the American National Red Cross, in a special issue of the FCDA Women's Newsletter.

The American Legion Auxiliary held its annual training course on home protection at FCDA Staff College, Olney, Md., in January.

The women's auxiliary to the American Medical Association held a panel program on civil defense at its convention in Atlantic City.

The Future Homemakers of America held special round table discussions on civil defense at their meeting in Chicago. This meeting resulted in many requests for program material.

The Newsletter increased its circulation from 5,000 to 19,000 during the year, with 500 to 1,000 additional requests coming in each month. Fourteen issues were published during the year. One on skits was especially popular because of the wide use made of it as the basis for club programs. Another one, "Grandma's Pantry Goes on Wheels," was widely used at State and county fairs, food fairs, and other booths and displays.

The National Women's Advisory Committee meeting was held in Washington, D. C., November 4 and 5, 1955, with 131 in attendance. Recommendations from this committee were used as the basis and guideline for the year's work. Members of the committee were briefed by the Air Force at a special meeting in the Pentagon.

The first youth conference for civil defense was held in January 1956 in Battle Creek, Mich. Both adult and teenage representatives of youth groups attended. A recommendation was made that an official youth conference should be held with a representative from each national organization.

Two official representatives of FCDA, several civil defense volunteers, and members of the American National Red Cross staff were



sent to England for a special 6-week welfare training program given by the Women's Voluntary Services of Great Britain.

Uniform designs for women volunteers were established. Plans for promotion and publicity were scheduled for fiscal year 1957 to be a part of Civil Defense Week.

The first use of December 7th as a promotional date for civil defense was made with an interview broadcast on a national TV network.

Regional conferences attended by representatives of all the States were held in 5 of the 7 regions. Similar meetings were held in many of the States and cities.

## GROUND OBSERVER CORPS

The Ground Observer Corps program is administered by the U. S. Air Force. National and local CD officials assist in recruiting. Considerable progress has been made in this program of organizing observation posts and recruiting volunteers to scan the skies for enemy planes as a supplement to radar and other means of guarding against surprise attacks of enemy planes. As of June 30, 1956, the Air Force estimated that to man this program fully the Nation would require 23,418 posts and 1,400,000 volunteers.

The program has grown since December 1952, as indicated by the following charts, from fewer than 10,000 observation posts and approximately 250,000 volunteers to its status on June 30, 1956, with 17,690 observation posts and 474,425 volunteers. Of the 17,690 observation posts, 13,455 are at required locations in order to provide air surveillance; 11,801 are classified as "operationally capable" posts maintaining operational proficiency with a sufficient number of trained personnel to maintain continuous operation for any 72-hour period during actual or simulated alerts and available for reporting 12 months out of the year. A total of 889 posts is classified as "operationally ready" in that they operate around the clock or average at least 160 hours in operation per week specifically observing aircraft. Of these 474,425 volunteers the Air Force reports as of June 30, 1956, show 351,089 were active and 123,336 inactive.

As of June 30 the observation posts report their observations of aircraft to 72 filter centers scattered through the country. These centers with the area reporting to each are indicated on figure 9. There was one change by June 30 which the map does not show, namely, the areas served by Casper and Rapid City were consolidated, with Casper serving both. Other consolidations were scheduled to take place during July and August as follows:



Saginaw combined with Grand Rapids.

Louisville combined with Lexington.

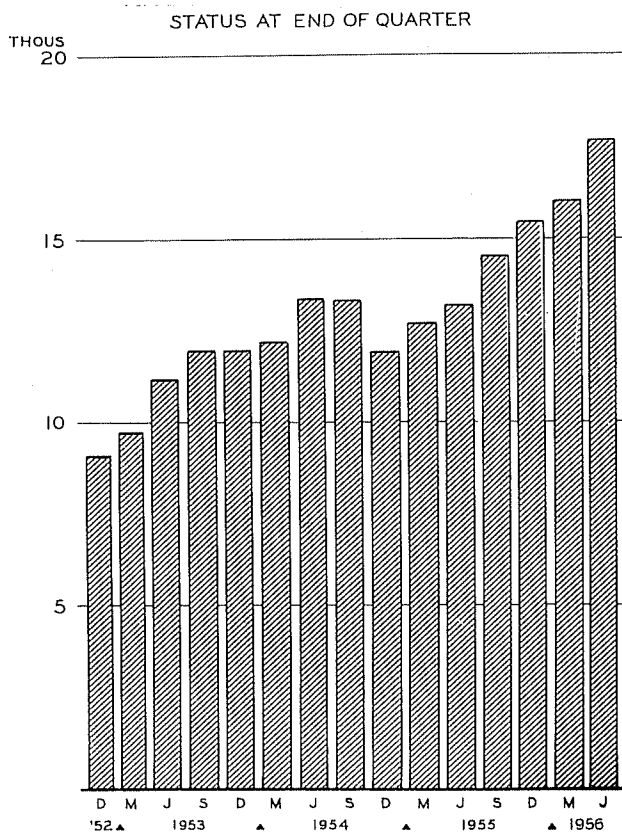
Roanoke combined with Richmond.

Seattle combined with Portland.

White Plains combined with Trenton.

In addition to filter centers and boundaries of their areas, the map shows Air Defense Identification Zones (ADIZ's) set up to maintain air surveillance in these areas and to assist in the peacetime control of air traffic. Only aircraft flying at a true air speed of 110 knots or less and at an altitude of 1,500 feet or less are authorized to fly within an ADIZ without a flight plan previously filed with the Civil Aeronautics Administration. After the filing of a flight plan a pilot in command of an aircraft must adhere to the plan within certain toler-

FIGURE 7.—OBSERVATION POSTS ORGANIZED



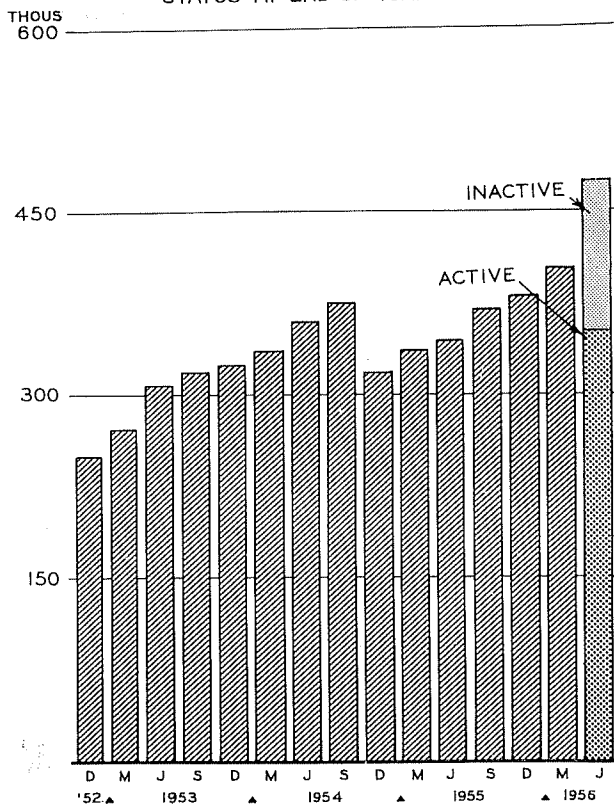


ances. Otherwise he will be designated as an unknown and jet fighter-interceptor aircraft will be sent aloft to make positive identification.

The following table presents statistics on Ground Observer Corps by States. Six States and the District of Columbia had organized observation posts equal to 90 percent or more of those required at specific locations. Ten States had from 75 to 89 percent, 18 States had 50 to 74 percent, 9 States had 25 to 49 percent, and 5 States had less than 25 percent of the needed posts at required locations. Requirements for volunteers, by States, were not available. The States with the largest numbers of active volunteers were Texas, California, Minnesota, Pennsylvania, New Mexico, Iowa, and Michigan, each of which had over 15,000 active volunteers.

FIGURE 8—VOLUNTEERS ENROLLED

STATUS AT END OF QUARTER





## OBSERVATION POSTS—BY STATE

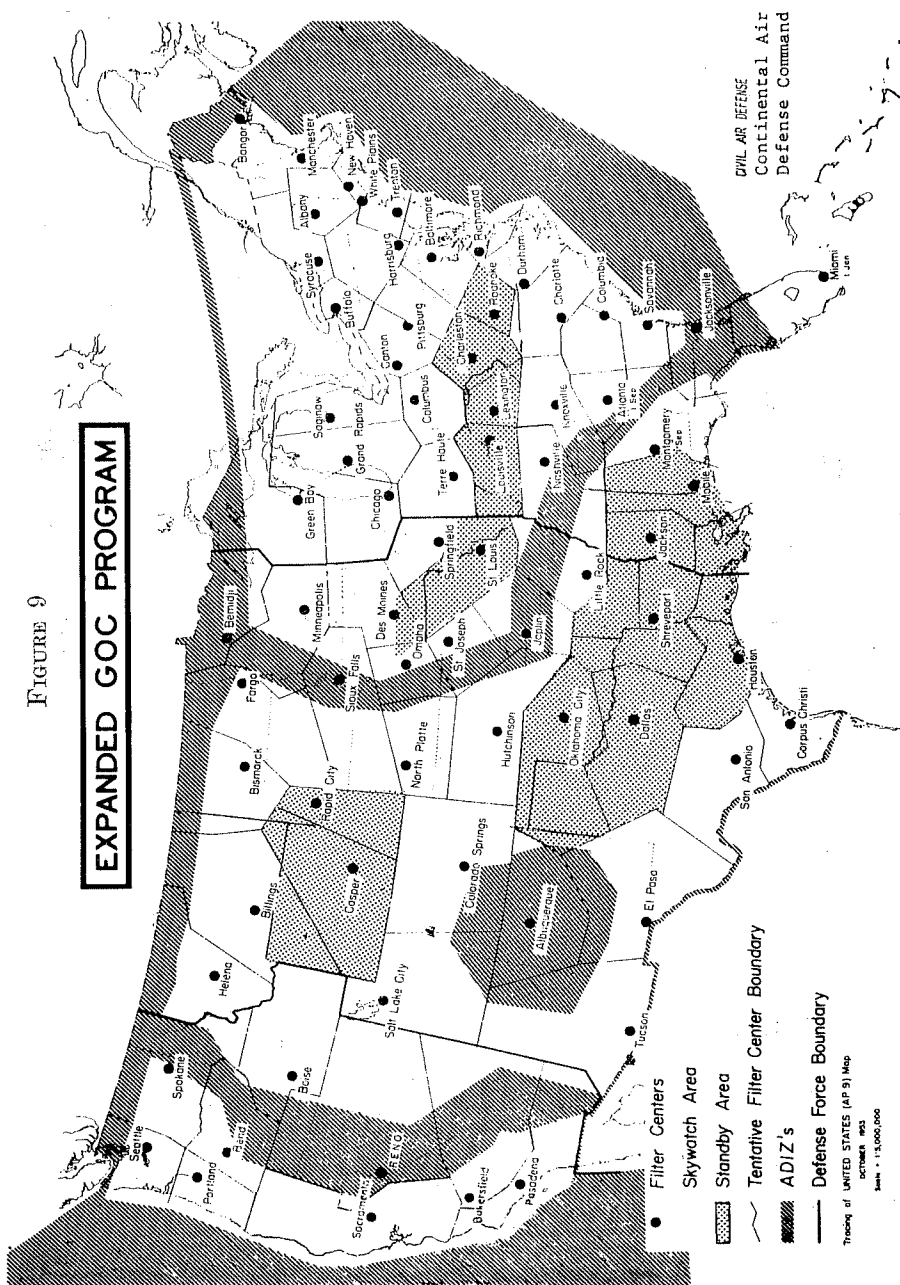
FCDA region and State	Number required	Organized at required locations		Total number organized	Operationally ready (24 hours)	Active volunteers
		Number	Percent of required			
Total.....	23, 418	13, 455	57	17, 416	889	1 365, 797
Region 1.....	1, 574	1, 347	86	1, 452	116	36, 689
Connecticut.....	89	85	96	87	3	5, 021
Maine.....	310	283	91	285	17	6, 446
Massachusetts.....	140	135	96	137	3	3, 265
New Hampshire.....	127	108	85	123	6	2, 054
New Jersey.....	153	102	67	114	28	3, 195
New York.....	617	602	81	557	48	12, 253
Rhode Island.....	23	17	74	26	1	539
Vermont.....	115	115	100	123	10	3, 916
Region 2.....	2, 190	1, 723	79	1, 879	122	45, 670
Delaware.....	23	16	70	23	-----	1, 000
District of Columbia.....	1	1	100	1	-----	265
Kentucky.....	392	308	79	312	2	7, 346
Maryland.....	107	89	83	122	42	2, 565
Ohio.....	491	369	75	381	19	4, 450
Pennsylvania.....	503	519	88	542	20	18, 336
Virginia.....	368	264	72	335	33	7, 085
West Virginia.....	215	157	73	163	6	4, 623
Region 3.....	2, 851	1, 609	56	2, 132	101	43, 337
Alabama.....	388	105	27	108	4	2, 416
Florida.....	470	308	66	415	25	8, 900
Georgia.....	582	434	75	525	18	10, 624
Mississippi.....	398	85	21	85	2	2, 147
North Carolina.....	342	247	72	386	15	4, 811
South Carolina.....	266	182	68	337	11	6, 702
Tennessee.....	405	248	61	276	26	7, 737
Region 4.....	3, 218	2, 139	66	2, 431	144	55, 655
Illinois.....	700	478	68	570	19	13, 738
Indiana.....	453	408	90	409	18	8, 758
Michigan.....	718	628	87	647	62	15, 230
Missouri.....	673	133	20	146	3	4, 089
Wisconsin.....	674	492	73	659	42	13, 840
Region 5.....	3, 650	1, 450	40	1, 776	77	51, 007
Arkansas.....	645	151	23	173	13	2, 923
Louisiana.....	445	142	32	142	-----	3, 077
New Mexico.....	393	273	69	449	12	18, 148
Oklahoma.....	429	134	31	134	3	4, 633
Texas.....	1, 738	750	43	878	49	22, 226
Region 6.....	4, 362	2, 680	61	4, 260	108	73, 680
Colorado.....	453	481	106	492	6	6, 515
Iowa.....	622	249	40	554	19	15, 726
Kansas.....	634	178	28	241	7	4, 203
Minnesota.....	853	492	58	1, 100	31	18, 809
Nebraska.....	588	352	60	644	9	9, 700
North Dakota.....	404	355	88	538	32	11, 803
South Dakota.....	398	310	78	428	4	4, 160
Wyoming.....	410	263	64	263	-----	2, 764
Region 7.....	5, 573	2, 507	45	3, 486	221	59, 759
Arizona.....	507	240	47	285	33	1, 900
California.....	1, 249	628	50	983	51	20, 368
Idaho.....	596	218	37	414	23	7, 306
Montana.....	748	464	62	575	61	10, 166
Nevada.....	770	135	18	162	4	1, 417
Oregon.....	800	315	39	439	18	7, 628
Utah.....	367	204	56	210	2	3, 127
Washington.....	536	303	57	418	29	7, 847

<sup>1</sup> Data for some States are for a month earlier than June. As of June 30, 1956, the total number of observation posts organized was 17,690 and the total number of active volunteers was 351,089.



FIGURE 9

# EXPANDED GOC PROGRAM





## TRAINING SCHOOLS

FCDA operates a Staff College in Battle Creek, Mich., and a Rescue School at Olney, Md. In these centers civil defense training is carried on under the Act of Congress creating the agency which authorizes it to "conduct or arrange, by contract or otherwise, for training programs for the instruction of civil defense officials and other persons in the organization, operation, and techniques of civil defense; conduct or operate schools or classes \* \* \*, and provide instructors and training aids as deemed necessary."

The Staff College in Battle Creek has specialized in training civil defense administrative officials in its 1-week administration course. Its other basic courses of at least one week are (a) an operations course covering problems a local civil defense organization would face in an enemy attack, and (b) an evacuation course dealing with the techniques and problems of evacuating a target area. In addition it conducts numerous special courses and conferences for the orientation of Government employees and for instruction of specialized and technical groups such as communications specialists, police officers, fire fighters, engineers, public health officials, the clergy, industry representatives, and others.

The Rescue School at Olney, Md., normally conducts three basic courses: (1) a 2-week basic course for instructors who, presumably, will promote and carry on rescue training work in the States and cities, (2) a 1-week light rescue course, and (3) a 1-week advanced rescue course.

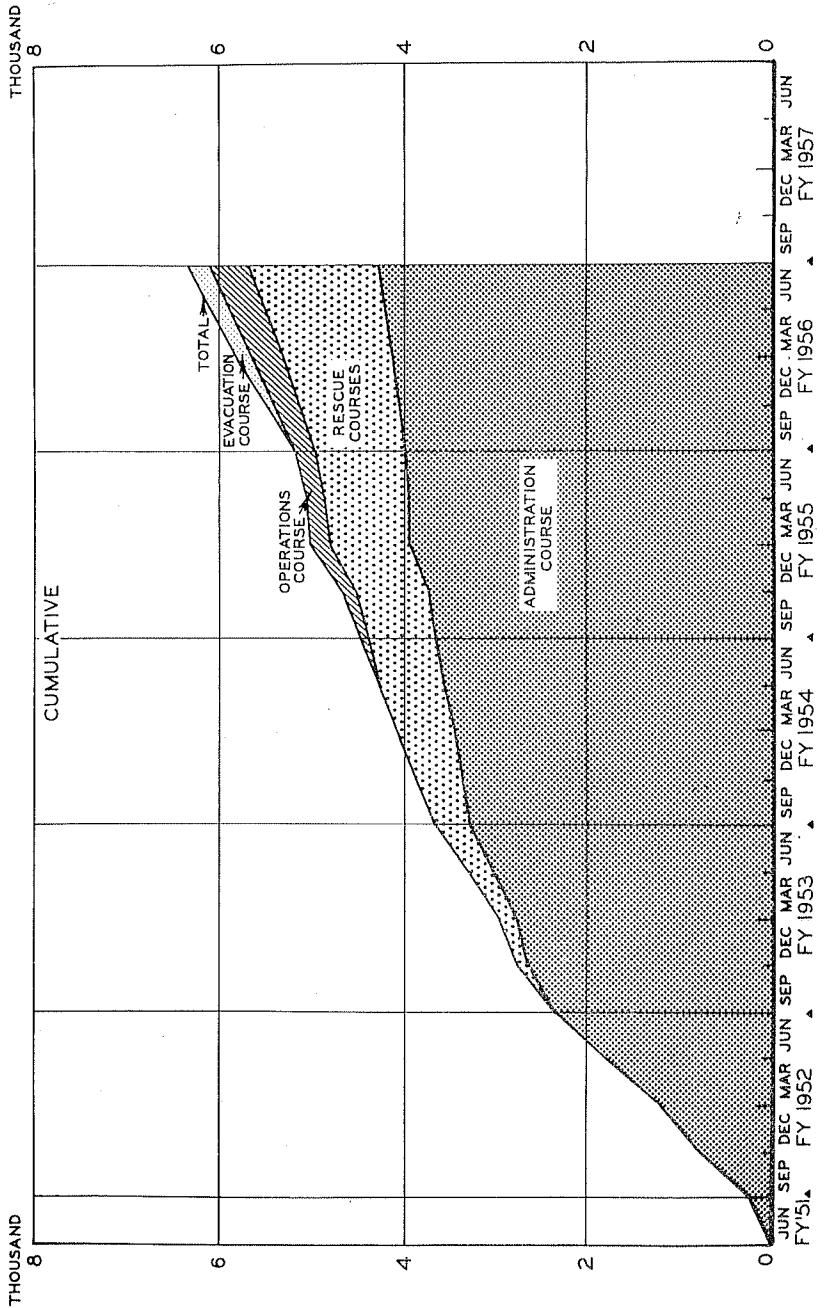
As of June 30, 1956, some 13,625 people had been trained in FCDA schools. (There is undoubtedly some duplication in this figure where the same person completed two or more courses.) A total of 6,406 had completed one of the basic courses and 7,219 attended the special courses and conferences, most of which lasted 2 or 3 days. In fiscal year 1956 a total of 1,204 people completed one of the basic courses and 1,044 received instruction in the special courses and conferences. The following table shows detailed figures and the chart shows the trend of training in the various basic courses.

Basic course <sup>1</sup>	Number of persons trained		
	Prior to fiscal year 1956	Fiscal year 1956	Total
Administration.....	3, 964	311	4, 275
Operations.....	207	176	383
Rescue instructor.....	965	173	1, 138
Light rescue.....		255	255
Advanced rescue.....	66	22	88
Evacuation.....		267	267
Subtotal.....	5, 202	1, 204	6, 406
Special courses and conferences.....	6, 175	1, 044	7, 219
Total.....	11, 377	2, 248	13, 625

<sup>1</sup> All basic courses are of 1 week duration, except rescue instructor which is 2 weeks.



FIGURE 10  
PERSONS COMPLETING BASIC CD COURSES  
Fiscal Years 1951-56





## Persons Completing Basic CD Courses by Region and State, 1951-56

Students in basic civil defense courses have come from every State in the Union. Most of the Territories and possessions have sent people for training also. A total of 454 persons from California has received training. Five other States have benefited by having 200 or more persons trained, namely, Maryland (310), Ohio and Okla-

Region and State	Number of persons	Region and State	Number of persons
Total.....	6, 406	Region 6.....	291
Region 1.....	633	Colorado.....	32
Connecticut.....	131	Iowa.....	2
Maine.....	29	Kansas.....	115
Massachusetts.....	132	Minnesota.....	71
New Hampshire.....	24	Nebraska.....	45
New Jersey.....	129	North Dakota.....	6
New York.....	139	South Dakota.....	9
Rhode Island.....	42	Wyoming.....	11
Vermont.....	7	Region 7.....	620
Region 2.....	1, 246	Arizona.....	55
Delaware.....	87	California.....	454
Dist. of Columbia.....	89	Idaho.....	11
Kentucky.....	42	Montana.....	4
Maryland.....	310	Nevada.....	3
Ohio.....	281	Oregon.....	35
Pennsylvania.....	138	Utah.....	12
Virginia.....	248	Washington.....	46
West Virginia.....	51	Territories and possessions.....	70
Region 3.....	465	Alaska.....	15
Alabama.....	48	American Samoa.....	6
Florida.....	181	Canal Zone.....	2
Georgia.....	64	Guam.....	31
Mississippi.....	17	Puerto Rico.....	11
North Carolina.....	39	Virgin Islands.....	5
South Carolina.....	14	Other.....	1, 979
Tennessee.....	102	FCDA.....	663
Region 4.....	531	Department of De- fense.....	854
Illinois.....	80	Other Federal Agen- cies.....	302
Indiana.....	121	Foreign.....	160
Michigan.....	211		
Missouri.....	43		
Wisconsin.....	76		
Region 5.....	571		
Arkansas.....	7		
Louisiana.....	190		
New Mexico.....	12		
Oklahoma.....	281		
Texas.....	81		



homa (281 each), Virginia (248), and Michigan (211). Each of the other States had a smaller number ranging down to less than 10 people for 7 States and some of the Territories and possessions. Many of the people trained have been sent by Federal Agencies in which they are employed and 160 people have come from foreign countries. The figures in table on page 53 include some duplication where the same people completed more than one basic course.

### FCDA Training School Extension Program

In addition to the training activities at FCDA's Staff College in Battle Creek, Mich., and its Rescue School at Olney, Md., a program of training is going forward in the States to assist them in developing their own training programs.

Under one phase of this plan an agreement is made with the State civil defense office which calls for the presentation of an initial Civil Defense Administration Course in the State by a traveling team of FCDA instructors. Some institution of higher learning within the State serves as a cooperating agency, and its facilities are utilized. Among those taking this course are university faculty members, as well as key State and local civil defense personnel who will serve as instructors in subsequent State courses. The State agrees to present the same type of course at least twice a year for 3 years under terms of a contract. Some financial assistance is furnished the State by FCDA for the initial course.

### ADMINISTRATION COURSES GIVEN BY FCDA TRAVELING TEAMS

State	Date of FCDA course	People trained by FCDA staff
Ohio.....	Aug. 9-14, 1954.....	54
Connecticut.....	Oct. 4-8, 1954.....	50
Florida.....	Nov. 15-19, 1954.....	73
Georgia.....	May 23-27, 1955.....	30
Wisconsin.....	June 19-23, 1955.....	28
Tennessee.....	Sept. 5-9, 1955.....	58
Maine.....	Sept. 19-23, 1955.....	49
Maryland.....	Oct. 24-28, 1955.....	46
Louisiana.....	Mar. 5-9, 1956.....	58
Kansas.....	Apr. 2-6, 1956.....	31
Total.....	10 courses	477

The first of these State courses was given by an FCDA traveling team in Ohio in August 1954. Through June 30, 1956, a total of 10 Civil Defense Administration Courses had been given in as many



States with a total of 477 persons having been trained. Eight of the States had repeated the course one or more times to an additional 591 trainees.

### ADDITIONAL ADMINISTRATION COURSES GIVEN BY STATES

State	Number of courses	People trained
Ohio .....	4	130
Connecticut .....	3	119
Florida .....	3	133
Georgia .....	1	60
Maine .....	1	53
Maryland .....	1	35
Tennessee .....	1	31
Wisconsin .....	1	30
Total .....	15 courses	591

In a second phase of this program FCDA traveling teams have gone into the field and presented special courses to specialized groups. These have been made in response to requests from the States and in accordance with arrangements worked out by the States and FCDA regional offices. Four such courses were given during the first six months of 1956 to 202 persons.

### SPECIAL COURSES GIVEN BY FCDA TRAVELING TEAMS

Location	Designation	Date	People trained
Dallas, Tex. ....	Federal employees .....	Feb. 15-17, 1956 .....	62
Dallas, Tex. ....	Religious affairs .....	Feb. 20-21, 1956 .....	30
Monroe, La. ....	Nurses-dentists .....	Mar. 12-14, 1956 .....	60
Kansas City, Mo. ....	Federal employees .....	Apr. 9-11, 1956 .....	50
Total .....	4 courses		202

### Police Institutes

FCDA has provided instruction in civil defense police functions and problems in civil defense to groups in 14 cities. These institutes are conducted by experts in the field at FCDA expense in cooperation with State civil defense and police officials and under guidance of FCDA staff members. Some 1,824 people had participated in these institutes as of June 30, 1956. These were chiefly police officers, sheriffs, auxiliary police, regional civil defense officials, and military personnel.



## INSTITUTES HELD

Fiscal Year 1952-56

Location	Date	Attend- ance	Location	Date	Attend- ance
Portland, Oreg.....	May 10-20, 1952...	174	College Park, Md.....	Nov. 9, 1954.....	150
Louisville, Ky.....	Apr. 8-9, 1953.....	130	Camp Perry, Ohio.....	May 15-16, 1955....	73
Providence, R. I.....	Oct. 20-21, 1953....	88	Indianapolis, Ind.....	Apr. 19-20, 1956....	48
Hartford, Conn.....	Feb. 9-10, 1954.....	589	Springfield, Ill.....	May 14-15, 1956....	83
Atlanta, Ga.....	Mar. 30-31, 1954....	108	Olney, Md.....	June 19-20, 1956....	55
Montgomery, Ala.....	Apr. 7-8, 1954.....	124			
Chapel Hill, N. C.....	June 23-24, 1954....	102	Total.....		1,824
Dover, Del.....	Nov. 8-12, 1954....	100			

## Emergency Traffic Control

Efficient use of highways and control of traffic are among the problems that would be faced in the event of enemy attack and attempted prior evacuation. As one step toward preparation in this field FCDA, in conjunction with the staff of Northwestern University Traffic Institute, developed a course of instruction on emergency supervision and regulation of street and highway traffic for civil defense purposes. This course has been given at FCDA expense in 15 cities for the benefit of State and local traffic control officers and other civil defense officials. Some 489 persons have received this training, 188 representing the States, 230 representing civil subdivisions, 21 representing the Department of Defense, and 50 other civil defense officials—mostly employees of FCDA national and regional offices. Of the 418 representing States and civil subdivisions, 248 were police traffic supervisors, 90 were traffic engineers, 37 were civil defense highway transportation officials, and 43 were other civil defense officials.

## COURSES PRESENTED

Location	Date	Attend- ance	Location	Date	Attend- ance
Evanston, Ill.....	Feb. 18-29, 1952...	21	Lowry AF Base,	Sept. 14-25, 1953...	39
Olney, Md.....	May 26-June 6, 1952.....	23	Denver, Colo.		
			Lansing, Mich.....	Dec. 7-11, 1953.....	27
Boston, Mass.....	July 14-25, 1952....	27	Monroe, La.....	June 8-10, 1954....	26
Evanston, Ill.....	Sept. 8-19, 1952....	38	Columbus, Ga.....	Nov. 15-19, 1954....	12
Seattle, Wash.....	Sept. 29-Oct. 10, 1952.....	28	Louisville, Ky.....	Jan. 10-14, 1955....	18
			Battle Creek, Mich.....	Mar. 21-25, 1955....	36
St. Mary's College, Calif.....	Nov. 19-21, 1952....	41	Detroit, Mich.....	Dec. 5-9, 1955.....	40
Naval Air Station, Dallas, Tex.....	Feb. 16-26, 1953....	71	Total.....		489
Georgia Inst. of Technology.....	Apr. 27-May 8, 1953.....	32			



## ENROLLMENT REPRESENTATION

	June 30, 1955	July 1, 1955 to June 30, 1956	Total June 30, 1956
Total .....	449	40	489
States .....	182	6	188
Subdivisions .....	203	27	230
Department of Defense .....	21	0	21
Other .....	43	7	50

## MOTION PICTURES

FCDA has recognized the importance of motion pictures as a training aid for use both in formal instruction courses and for general public education. Almost from the beginning of the agency, work has gone forward in the production of civil defense films. Some of them have been produced at FCDA cost. Others have been sponsored by commercial enterprises and produced at no cost to FCDA. A variety of fields and situations have been covered—survival, shelter, evacuation, and expected damage in the event of attack. Most of the films have been cleared for television use and are available also for use in schools, churches, and civic organizations.

Some of the earlier films released have been withdrawn because changing concepts and new weapons have made them obsolete.

The following lists show the films which are now completed and available and those in process for release in the future.

## FILMS COMPLETED AND AVAILABLE

Name	Black and white or color	Running time (minutes)	Date released
A New Look at the H Bomb .....	Both	10	Feb. 1955.
Atomic Attack <sup>1 2</sup> .....	B & W	50	1954.
Big Men in Small Boats <sup>1</sup> .....	Both	13½	Jan. 1956.
Bombproof <sup>1</sup> .....	Both	13½	Jan. 1956.
CONELRAD <sup>1</sup> .....	B & W	9	May 1955.
Escape Route <sup>1</sup> .....	C	13½	Aug. 1955.
First Aid (6 TV Film Spots) .....		( <sup>3</sup> )	Feb. 1954.
Frontlines of Freedom .....	B & W	13	Jan. 1955.
House in the Middle, The .....	B & W	6½	Oct. 1953.
House in the Middle, The <sup>1</sup> .....	Both	12	1954.
Let's Face It .....	C	13½	Aug. 1955.
New Family in Town <sup>1</sup> .....	B & W	13½	( <sup>4</sup> )
Operation Cue .....	Both	13½	May 1956.
Operation Doorstep <sup>1</sup> .....	B & W	10	June 1953.
Operation Ivy .....	Both	28	Mar. 1954.
Operation Seal .....	B & W	11½	1954.
Operation Welcome .....	C	10	Aug. 1955.
Rehearsal for Disaster <sup>1</sup> .....	B & W	13½	Jan. 1956.
Rescue Street <sup>1</sup> .....	Both	14	1954.
Target You .....	B & W	10	July 1955.
Time of Disaster <sup>1</sup> .....	B & W	10	Dec. 1954.
To Live Tomorrow <sup>1</sup> .....	B & W	13½	July 1955.
Trapped .....	B & W	20	Feb. 1954.
Warning Red <sup>1</sup> .....	B & W	13½	May 1956.

<sup>1</sup> Sponsored and/or financed by a commercial organization with cooperation of FCDA.

<sup>2</sup> Not cleared for television.

<sup>3</sup> Various.

<sup>4</sup> For release in August 1956.



## NEW FILMS IN PROCESS

Atomic Torch (Mass Fire Fighting)	Operation Alert 1956
Big Voice, The (Gary, Ind., Exercise 1956 Alert)	Operation Kids (Evacuation of Schools)
Church in Civil Defense	Operation Scramble (Hospital Evacuation, St. Louis)
Civil Defense for Industry	Stroudsburg Story (Delivery of drinking water during Natural Disaster)
Civil Defense Week Documentary	Tomorrow Today (Series of 13 TV ¼-hr. programs—embracing various civil defense subjects)
Disaster Documentary	
Facts About Fallout	
Farm Civil Defense	
Helicopters in Civil Defense	
High Yield Weapons Effects	
Nerve Gas Casualties	

## FILMSTRIPS

Filmstrips are one of the most effective training aids in civil defense. Filmstrips, dealing with a wide variety of civil defense subjects, have been produced by FCDA and in most cases have been interwoven with lesson units and training courses available to civil defense and other organizations. States and local subdivisions can purchase these materials under the Federal-State Matching Funds Program by submitting applications to the FCDA regional offices.

Following are the titles of filmstrips now available and those currently in process.

## FILMSTRIPS COMPLETE AND AVAILABLE

Title	Date released	Title	Date released
<i>Public Information</i>		<i>Training</i>	
Civil Defense Against Biological Warfare.....	June 1956	What You Should Know About Radioactive Fallout.....	Jan. 1956
Civil Defense of Animals Against Biological Warfare.....	June 1956	Skills Training Series:	
Civil Defense of Man Against Biological Warfare.....	June 1956	Emergency First Aid.....	Sept. 1953
Civil Defense of Plants and Crops Against Biological Warfare.....	June 1956	Fire Fighting—Part I.....	Sept. 1953
Improvised Hospitals (2).....	May 1954	Fire Fighting—Part II.....	Sept. 1953
Operation Cue.....	Oct. 1955	Handling and Care of Ladders.....	Sept. 1953
Role of the Warden in Fire, The.....	May 1953	Lowering and Raising Casualties on a Stretcher.....	Sept. 1953
Role of the Warden in Rescue, The.....	Dec. 1952	Pick-ups, Carries and Rags.....	Sept. 1953
Warden's Responsibility for Emergency Sanitation, The.....	Dec. 1953	Ropes and Knot Tying—Part I.....	Sept. 1953
		Ropes and Knot Tying—Part II.....	Sept. 1953
		Using a Ladder as a Stretcher.....	Sept. 1953
		Using Improvised and Regular Stretchers.....	Sept. 1953
		Using Ladders in Rescue.....	Sept. 1953



## FILMSTRIPS IN PROCESS

### *Public Information*

Civil Defense Against Biological Warfare<sup>1</sup>  
 Conducting a Neighborhood Civil Defense Meeting  
 Evacuation of Neighborhood Handicapped Persons  
 Facilities and the Block Warden Organization  
 Mobilizing the Neighborhood for Evacuation  
 Preparing your Neighborhood for Evacuation  
 Role of the Warden in the H-Bomb Era,<sup>1</sup> The  
 Shelter from Fallout  
 Your Family Evacuation Plan

### *Training*

Warden :  
 Block Census, The  
 Map Making for Wardens  
 Role of the Warden in Receiving and Billeting Evacuees, The

### *Industry :*

Establishing Protective Shelters in Industry  
 Evacuation of Industrial Plants  
 Moving Industrial Workers into Shelters  
 Organizing for Civil Defense Protection in Industry  
 Eliminating Hazards to Civil Defense in Industry  
 Planning Civil Defense Protection in Industry

### *Rescue :*

Damage Survey for Rescue Workers  
 Reconnaissance and Rescue by Stages  
 Rescue from Basements  
 Rescue Squad Operations  
 Rescue Tools and Techniques

### *Welfare :*

Registration and Information  
 Welfare Program in Civil Defense, The  
 Emergency Mass Feeding

## RADIO AND TELEVISION

Radio and television are most effective means of getting a message to a large number of people in the shortest possible time. FCDA uses them in three principal ways: (1) by providing specially prepared spots, films, and programs to stations throughout the country to keep reminders of civil defense constantly before the public, (2) by integrating civil defense information into regular network broadcasts either by personal appearances of civil defense people or the material into the usual format of programming, and (3) by preparing special civil defense programs for actual use on radio networks, such as the current programs on the Mutual Broadcasting System entitled "By the People," and "Dateline Defense." Radio materials are usually recorded on transcription platters and distributed to every station in the United States and the Territories. TV materials are put on film and likewise sent to all stations. A list of available materials appears below.

<sup>1</sup> Filmograph.



## MATERIALS AVAILABLE

## RADIO TRANSCRIPTIONS

Title	Running time	Explanation
CONELRAD Spots.....	21 to 53 seconds.....	Well-known commentators.
CONELRAD Spots.....	19 to 50 seconds.....	Announcers.
CONELRAD Spots (Series II).....	1 minute.....	Novelty—humorous.
Dramatized Spots.....	1 minute; 20 seconds; 10 seconds.	Civil defense basic spots in dramatic form.
Firefighting for Household.....	1 minute.....	Spot announcement.
Firefighting for Household.....	18 seconds.....	Do.
Firefighting for Household.....	14½ minutes.....	Radio program.
"No Second Chance".....	14½ minutes.....	Dramatic CONELRAD program.
Personality Spots.....	Various.....	Civil defense announcements by leading stars of radio and television.
Religious Spots.....	30 seconds.....	Civil defense announcements by top religious leaders.
Stars for Defense <sup>1</sup> .....	14 minutes each.....	Musical programs with top singing stars.
The Farmer and Civil Defense <sup>1</sup> .....	29½ minutes.....	Roundtable discussion between Governor Peterson, Undersecretary of Agriculture True D. Morse, and leaders of national farm organizations.
This is Civil Defense.....	15 minutes each.....	Series of 13 dramatic programs.

## TELEVISION MATERIAL

CONELRAD.....	20 seconds.....	Film spot.
Star TV Film Spots <sup>1</sup> .....	1 to 3 minutes.....	Famous stars give civil defense messages.
TV Station I. D. Slide.....		Station break call letters slide.

<sup>1</sup> For release in September 1956.

## PUBLICATIONS

FCDA has published and distributed a large number of publications dealing with various aspects of civil defense in accordance with provisions of the basic law creating the Agency which authorized the Administrator to "publicly disseminate appropriate civil defense information by all appropriate means."

As of June 30, 1956, more than 145,000,000 copies of publications had been distributed and sold. Many of these were administrative and technical manuals, bulletins, guides, and handbooks for use of civil defense officials and for training and educational purposes. Many others were issued for the information and guidance of the general public. These included numerous small booklets, leaflets, and cards on specific aspects of civil defense. The following table shows the number of copies distributed and issued in fiscal year 1956.



## Material Distributed and Issued in Fiscal Year 1956

Administrative guides.....	95, 968
Flyers.....	33, 970
Handbooks.....	693, 149
Instructor's guides.....	135, 205
Manuals.....	8, 420
Posters.....	526, 662
Program guides.....	50, 310
Public booklets.....	5, 192, 314
Technical bulletins.....	901, 422
Technical manuals.....	294, 767
Technical reports.....	82, 611
Training and education bulletins.....	5, 227
Training bulletins.....	29, 012
Volunteer manpower.....	11, 610
Miscellaneous publications.....	40, 655, 972
Total.....	<sup>1</sup> 48, 716, 619

<sup>1</sup> Does not include sales by Superintendent of Documents, Government Printing Office.

In addition, at the year's end 1 instructor's guide, 4 technical bulletins, 1 technical report, and several miscellaneous publications were at the printer or otherwise in printing process, and will be distributed early in fiscal year 1957.

Many publications issued in early stages of the program became obsolete in the light of more recent developments and weapons and consequently have either been revised or replaced by new publications with later technical information. The following list shows the publications currently available. All of these are available from FCDA in Battle Creek, Mich., and most of them can be obtained also from the Superintendent of Documents in Washington, D. C.

### PUBLICATIONS

Available as of June 30, 1956

Identification	Title	Publication date
<i>Administrative Guides</i>		
AG-6-1	Supply Service, The.....	June 1952
AG-7-1	Warden Service, The.....	Aug. 1951
AG-8-1	Principles of CD Operations.....	July 1951
AG-9-1	Fire Services.....	Oct. 1951
AG-10-1	Police Services.....	{ May 1951 June 1952 <sup>1</sup>
AG-11-1	Health Services and Special Weapons Defense.....	{ Dec. 1950 June 1952 <sup>1</sup>
AG-12-1	Emergency Welfare Services.....	{ Feb. 1952 July 1952 <sup>1</sup>
AG-13-1	Engineering Services.....	{ Feb. 1952 July 1952 <sup>1</sup>
AG-14-1	Rescue Service, The.....	May 1951
AG-16-1	CD in Industry and Institutions.....	Aug. 1951
AG-25-1	Clergy in Civil Defense, The.....	Oct. 1951

See footnote at end of table.



## PUBLICATIONS—Continued

Identification	Title	Publication date
<i>Handbooks</i>		
H-3-1	Annotated CD Bibliography for Teachers.....	{ Dec. 1951 Sept. 1955 <sup>1</sup> Feb. 1956 <sup>1</sup> Apr. 1956 <sup>1</sup>
H-11-1	Before Disaster Strikes—What to Do Now About Emergency Sanitation at Home.....	{ Aug. 1953 Mar. 1954 <sup>1</sup> Oct. 1955 <sup>1</sup> Mar. 1956 <sup>1</sup>
H-11-2	Before Disaster Strikes—What the Farmer Should Know About Biological Warfare.....	{ Aug. 1954 Apr. 1955 <sup>1</sup> Nov. 1955 <sup>1</sup> Feb. 1956 <sup>1</sup>
H-25-2	Civil Defense Glossary.....	{ Feb. 1956 June 1956 <sup>1</sup>
<i>Instructor's Guides</i>		
IG-3-1	Skills Training Films.....	Aug. 1954
IG-3-2	Basic Course for Civil Defense.....	Feb. 1955
IG-3-3	Civil Defense Instructor's Course.....	Feb. 1956
IG-11-1	Venipuncture and Intravenous Procedures.....	Aug. 1954
IG-14-1	Basic Rescue Course.....	Jan. 1956
IG-19-1	Introduction to Radioactive Fallout.....	Sept. 1955
<i>Manuals</i>		
M6-1	Standard Item Specifications.....	Feb. 1952
M25-1	Federal Contributions.....	{ Oct. 1954 1955 <sup>1</sup>
M27-1	Survival Plan Manual (Advance).....	Sept. 1955
M27-2	Survival Plan Workbook (Advance).....	Dec. 1955
<i>Posters</i>		
	"Alert America".....	Apr. 1952
	Civil Defense—Part of Our Tradition.....	May 1954
	Disaster Strikes Suddenly (Car Cards).....	Sept. 1953
	Fiddling's Fun.....	May 1954
	Go Join Civil Defense.....	June 1954
	In Case of Air Raid (Billboard).....	July 1955
	In Case of Air Raid (Car Cards).....	Mar. 1955
	Natural Disaster.....	1956
	Mr. Civil Defense.....	1956
	Official CD Identification.....	July 1954
	Partners in Defense.....	1956
	Radioactive Fallout Poster.....	Sept. 1955
	Recruiting.....	Jan. 1953
	Rescue Training Poster.....	July 1955
	They Serve to Protect.....	Aug. 1954
<i>Program Guides</i>		
PG-11-1	Needed—Home Nursing for Civil Defense.....	Feb. 1955

See footnote at end of table.



## PUBLICATIONS—Continued

Identification	Title	Publication date
<i>Public Booklets</i>		
PA-2	What You Should Know About Biological Warfare.....	1951
PA-3	This is Civil Defense.....	{ May 1951
		{ June 1956 <sup>1</sup>
PA-4	Fire Fighting for Household.....	{ Oct. 1951
		{ Mar. 1956 <sup>1</sup>
PA-5	Emergency Action to Save Lives.....	{ July 1951
		{ Apr. 1954 <sup>1</sup>
PA-7	What You Should Know About Radioactive Fall-out.....	{ June 1955
		{ June 1956 <sup>1</sup>
PA-F-1	Mr. CD Reporting for Duty.....	1956
PA-F-2	Shake Off That Spring Fever.....	1956
PA-F-3	You and the Welfare Program.....	1956
<i>Technical Bulletins</i>		
TB-4-1	Advantages of FM over AM for Civil Defense Communications in the Frequency Bands 50 Megacycles per Second and Up.....	{ Oct. 1953
		{ Dec. 1953 <sup>1</sup>
TB-4-2	Radio Frequency Allocation Plans for Disaster Communications Service and Radio Amateur Civil Emergency Service.....	Oct. 1953
TB-4-3	National Communications Priorities.....	Sept. 1955
TB-5-1	Interim Design Standards for Protective Construction in Industrial Structures.....	Apr. 1954
		{ Sept. 1955
TB-5-2	Shelter From Radioactive Fallout.....	{ Oct. 1955 <sup>1</sup>
		{ Jan. 1956 <sup>1</sup>
		{ Nov. 1954
TB-7-1	The Role of the Warden in Panic Prevention.....	{ Sept. 1955 <sup>1</sup>
TB-8-1	Blast Damage from Nuclear Weapons of Larger Sizes.....	Feb. 1955
TB-11-1	Emergency Exposures to Nuclear Radiation.....	Mar. 1952
TB-11-2	Personal Dosimeters for Radiological Defense.....	Apr. 1952
TB-11-3	The Most Promising Personal Dosimeters for Civil Defense Use.....	Apr. 1952
TB-11-4	Development Status of Personal Dosimeters.....	Apr. 1952
TB-11-5	Emergency Blood Transfusion.....	Nov. 1952
TB-11-6	Emergency Blood Grouping Laboratory Techniques.....	Nov. 1952
TB-11-8	Permissible Emergency Levels of Radioactivity in Water and Food.....	{ Dec. 1952
		{ Sept. 1955 <sup>1</sup>
TB-11-9	Emergency Measurement of Radioactivity in Food and Water.....	Dec. 1952
TB-11-10	Responsibilities for Production and Distribution of Potable Water During Disaster.....	{ May 1953
		{ Apr. 1956 <sup>1</sup>
TB-11-11	Use of Tourniquet in Controlling Hemorrhage.....	{ June 1953
		{ Aug. 1955 <sup>1</sup>
TB-11-12	Civil Defense Household First Aid Kit.....	{ 1951
		{ Feb. 1954 <sup>1</sup>
TB-11-13	The FCDA Clinical Laboratory Assembly.....	{ July 1954
		{ Sept. 1955 <sup>1</sup>
TB-11-14	Revised Instructions for Shipping Blood.....	{ July 1954
		{ May 1956 <sup>1</sup>
TB-11-15	Phosphate Glass Dosimetry.....	July 1954
TB-11-16	Minimum Potable Water Supply Requirements in Civil Defense Emergencies.....	{ Aug. 1954
		{ Apr. 1956 <sup>1</sup>
TB-11-18	Biological Warfare Against Public Water Supply ..	Apr. 1955
TB-11-19	Protection Against Fallout Radiation.....	Sept. 1955
TB-11-20	Radiological Instruments for Civil Defense.....	Sept. 1955

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## PUBLICATIONS—Continued

Identification	Title	Publication date
<i>Technical Bulletins—Continued</i>		
TB-11-21	Fallout and the Winds.....	{Oct. 1955 Feb. 1956 <sup>1</sup>
TB-11-22	Radiation Physics and Bomb Phenomenology.....	{Dec. 1955 June 1956 <sup>1</sup>
TB-11-23	Promotion of an Emergency Hospital Exhibit.....	Apr. 1956
TB-13-1	Engineering Equipment Stockpiled for Emergency Water Supply Use.....	June 1952
TB-13-2	Utilization of FCDA Stockpiled Portable Generator Sets.....	Sept. 1953
TB-13-3	Preliminary Report of Tests of Thermal Type Atomic Bomb Air Zero Locators.....	Oct. 1953
TB-13-4	Report of Tests of Identification Tags Exposed to Blast and Thermal Radiation of an Atomic Bomb.....	Oct. 1953
TB-13-5	Utilization of FCDA Stockpiled Lightweight Steel Pipe and Centrifugal Pumps.....	Dec. 1953
TB-13-5	New Check Valve and Priming Instructions for FCDA Centrifugal Pumps.....	Dec. 1954
TB-13-6	Utilization of FCDA Stockpiled Portable Water Purifiers and Storage Tanks.....	Apr. 1954
TB-13-7	Utilization of FCDA Stockpiled Flexible Vinyl Film.....	Apr. 1954
TB-13-8	Utilization of FCDA Stockpiled Mobile Chlorinators.....	Apr. 1954
TB-13-9	Restoration of Gas Facilities in Civil Defense Emergencies.....	May 1954
TB-13-10	Sewage Works Facilities in Civil Defense Emergencies.....	June 1954
TB-13-11	Plastic Patching for Emergency Pipe Repairs.....	Apr. 1955
TB-14-1	Construction and Adaptation of Structures for Rescue Training.....	{Dec. 1952 Nov. 1953 <sup>1</sup>
TB-16-1	Casualty Services in Facilities.....	Aug. 1953
TB-16-2	Protection of Vital Records and Documents.....	May 1955
TB-16-3	Industry Defense—Sources of Reference and Guidance.....	{Dec. 1955 June 1956 <sup>1</sup>
TB-16-4	Industry Defense Checklist.....	Apr. 1956
TB-19-1	The Radioactive Fallout Problem.....	June 1955
TB-19-2	The Problem of Panic.....	June 1955
TB-27-1	Evacuation of Civil Populations in Civil Defense Emergencies.....	{Feb. 1955 Oct. 1955 <sup>1</sup>
TB-27-2	Evacuation Checklist.....	May 1955
TB-27-3	The Role of the Warden in the H-Bomb Era.....	Aug. 1955
<i>Technical Manuals</i>		
TM-4-1	Outdoor Warning Device Systems.....	{Oct. 1951 July 1952 <sup>1</sup>
TM-5-1	Shelter from Atomic Attack in Existing Buildings, Part I—Method for Determining Shelter Needs and Shelter Areas.....	{Feb. 1952 July 1952 <sup>1</sup>
TM-5-2	Shelter from Atomic Attack in Existing Buildings, Part II—Improvement of Shelter Areas.....	May 1952
TM-5-3	Interim Guide for the Design of Buildings Exposed to Atomic Blast.....	June 1952
TM-5-4	Windowless Structures—A Study in Blast-Resistant Design.....	{June 1952 Jan. 1953 <sup>1</sup>
TM-5-5	Home Shelters for Family Protection.....	July 1953
TM-8-1	Civil Defense Urban Analysis.....	July 1953
TM-9-1	Water Supplies for Wartime Fire Fighting.....	July 1951
TM-9-2	Fire Effects of Bombing Attacks.....	{1950 Aug. 1952 <sup>1</sup> Sept. 1955 <sup>1</sup>

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## PUBLICATIONS—Continued

Identification	Title	Publication date
<i>Technical Manuals—Continued</i>		
TM-11-1	Organization and Operation of Civil Defense Casualty Services, Part I—The First-Aid System.....	Jan. 1953
TM-11-3	Organization and Operation of Civil Defense Casualty Services, Part III—Medical Records for Casualties.....	{ Mar. 1952 Oct. 1952 <sup>1</sup>
TM-11-5	Blood and Blood Derivatives Program.....	{ Apr. 1952 Dec. 1952 <sup>1</sup> Jan. 1953 <sup>1</sup>
TM-11-6	Radiological Decontamination in Civil Defense.....	{ Mar. 1952 Sept. 1952 <sup>1</sup> July 1955 <sup>1</sup>
TM-11-7	The Nurse in Civil Defense.....	{ June 1952 Dec. 1952 <sup>1</sup> Apr. 1954 <sup>1</sup>
TM-11-8	Emergency Medical Treatment.....	Apr. 1953
TM-11-9	The Dentist in Civil Defense.....	{ Feb. 1953 Apr. 1954 <sup>1</sup>
TM-11-10	Civil Defense Against Biological Warfare.....	Nov. 1953
TM-11-11	The Veterinarian in Civil Defense.....	Jan. 1955
TM-11-11	The Veterinarian in Civil Defense (Errata).....	Aug. 1955
TM-11-12	Mortuary Services in Civil Defense.....	Apr. 1956
TM-12-1	Registration and Information Service.....	May 1954
TM-13-1	Utilization and Control of Streets and Highways in Civil Defense Emergencies.....	Jan. 1953
TM-13-2	Operation and Repair of Water Facilities in Civil Defense Emergencies.....	Sept. 1953
TM-13-3	Clearance and Restoration of Streets and Highways in Civil Defense Emergencies.....	Apr. 1954
TM-14-1	Rescue Techniques and Operations.....	{ Sept. 1953 Apr. 1952
TM-16-1	Civil Defense in Schools.....	{ Apr. 1952 Oct. 1952 <sup>1</sup>
TM-27-1	Procedure for Evacuation Traffic Movement Studies.....	Nov. 1955
TM-27-2	Planning and Organizing for Civil Defense Traffic Operations.....	{ Nov. 1955 Jan. 1956 <sup>1</sup>
<i>Technical Reports</i>		
TR-4-1	The Effectiveness of Sonic Outdoor Warning Devices.....	July 1954
TR-9-1	Preliminary Report Operation Firestop.....	Jan. 1955
TR-11-1	Effects of Nuclear Explosions Upon Drugs.....	Mar. 1955
TR-27-1	Operation Kids.....	Sept. 1955
TR-27-2	Scientific Study of the Preattack Evacuation of New York City.....	Oct. 1955
TR-27-3	Spontaneous Leadership in a Civil Defense Evacuation Exercise.....	Oct. 1955
TR-27-4	Operation Exit.....	June 1956
TR-27-5	Operation Green Light.....	June 1956
<i>Training Bulletins (Officer Series)</i>		
No. 1	Determining Civil Defense Training Needs.....	Jan. 1952
No. 2	Setting Up Your Civil Defense Program.....	Feb. 1952
No. 4	Getting Good Instructors for Civil Defense.....	Apr. 1952
No. 5	Improving Civil Defense Instruction: Planning.....	May 1952
No. 8	Improving Civil Defense Instruction: Use of Audio-Visual Aids.....	Aug. 1952
No. 9	Map Making for Wardens.....	Oct. 1952

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## PUBLICATIONS—Continued

Identification	Title	Publication date
<i>Training Bulletins (Officer Series)—Continued</i>		
No. 10	The Block Census.....	Nov. 1952
No. 11	The Role of the Warden in Rescue.....	Dec. 1952
No. 13	Reconnaissance Functions of the Block Warden.....	Jan. 1953
No. 14	Conducting a Neighborhood Civil Defense Meeting.....	Feb. 1953
No. 15	Facilities and Block Warden Organization.....	Mar. 1953
No. 16	Emergency Sanitation for Neighborhoods.....	Apr. 1953
No. 17	The Role of the Warden in Receiving and Billeting Evacuees.....	Apr. 1953
No. 18	The Warden Post Message Center.....	Apr. 1953
No. 22	Rescue Tools and Their Application to Rescue Techniques.....	July 1953
No. 23	Organizing a Neighborhood for Survival.....	Jan. 1954
Unnumbered	Rescue Squad Operations.....	May 1953
<i>Training Bulletins (School Series)</i>		
No. 1	How to Maintain a School Bulletin Board on Civil Defense.....	Jan. 1952
No. 2	What Teachers Should Know About Civil Defense.....	Mar. 1952
No. 5	Motion Pictures for Civil Defense Education.....	July 1952
No. 7	What Teachers Should Know About Atomic War- fare.....	Mar. 1953
<i>Miscellaneous</i>		
	AEC—A Report by the United States Atomic Energy Commission on the Effects of High Yield Nuclear Explosions.....	Feb. 1955
	Alert Signal.....	{ July 1955 1956 <sup>1</sup>
	Annual Report—1951.....	1952
	Annual Report—1952.....	1953
	Annual Report—1954.....	1954
	Annual Report—1955.....	1956
	Annual Statistical Report—Fiscal Year Report 1955.....	1955
	Atomic Blast Creates Fire.....	Sept. 1951
	Civil Defense and National Organizations.....	May 1951
	Civil Defense Household First Aid Kit.....	{ June 1951 June 1954 <sup>1</sup>
	Civil Defense Rescue Training—Brochure.....	{ Apr. 1955 Dec. 1955 <sup>1</sup>
	Cleveland Story, The.....	June 1954
	CONELRAD Identification Stamps (150 per book).....	Jan. 1954
	CONELRAD—Pamphlet.....	{ Sept. 1953 Apr. 1955 <sup>1</sup> Dec. 1955 <sup>1</sup> June 1956 <sup>1</sup>
	CONELRAD Sticker (80 per card).....	Apr. 1956
	Control of Communicable Diseases in Man.....	1955
	Corner Room Shelters.....	June 1953
	Damage from Atomic Explosion and Design of Pro- tective Structure.....	Aug. 1951
	Emergency Mass Feeding Instructor Course.....	Aug. 1953
	Employee Handbook.....	June 1952
	Evacuation Advertising Kit.....	May 1956
	Evacuation Signal.....	July 1955
	Facts About Civil Defense (Speakers Kit).....	May 1955
	Facts About Fallout.....	Mar. 1955
	Facts About the H-Bomb.....	Feb. 1955
	Filmstrip.....	Apr. 1954

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## PUBLICATIONS—Continued

Identification	Title	Publication date
	<i>Miscellaneous—Continued</i>	
	Four Wheels to Survival.....	{Oct. 1955 Feb. 1956 <sup>1</sup> Aug. 1953
	Home Protection Exercises—A Family Action Program.....	{June 1954 <sup>1</sup> June 1955 <sup>1</sup> Mar. 1956 <sup>1</sup>
	Home Protection Exercises (Exercise No. 1).....	1955
	Interim Statistical Report No. 1.....	Dec. 1955
	Lean-To Shelters.....	June 1953
	Leadership Guide—National Civil Defense Week.....	May 1956
	National Plan (Advance).....	May 1956
	Natural Disaster Manual.....	May 1956
	Operation Doorstep—2½ Seconds—Brochure.....	June 1953
	Operation Doorstep Booklet.....	Mar. 1953
	Outdoor Shelters.....	June 1953
	Rural Family Defense.....	1956
	Seal—CD Week “Alert Today”.....	June 1956
	Shelter Designs.....	July 1955
	Signs of Our Times.....	Oct. 1952
	Six Steps to Survival.....	Mar. 1955
	Special Course for Clergymen, A.....	Feb. 1956
	States, Counties, and Cities in Civil Defense, The.....	Mar. 1955
	Target Areas for Civil Defense.....	{Feb. 1952 July 1953 <sup>1</sup>
	Three Minutes of Your Time Can Save a Life.....	Feb. 1953
	TV—Flip Card—CD Week.....	May 1956
	Underground Personnel Shelters.....	Sept. 1955
	United States Civil Defense.....	1950
	Visitors’ Brochure.....	Jan. 1956
	What You Can Do Now.....	{Oct. 1952 Mar. 1954 <sup>1</sup> Feb. 1956 <sup>1</sup>

<sup>1</sup> Revised.

## TRAINING EXERCISES

The task of developing civil defense preparedness against the possible use of modern atomic and hydrogen weapons is without precedent in the United States. Consequently basic policies, plans, and procedures had to be evolved and developed at all government levels. Training and practice exercises have been one means used to test and develop proposed plans. Many training exercises have taken place throughout the country as State and local civil defense organizations developed projects in which testing was useful. Such exercises have been especially useful in testing evacuation plans, reception area plans, mass feeding and other mass care programs, warning and communication systems, as well as in training specific groups of civil defense workers in the performance of their emergency duties.

The following table lists State and local training exercises that have been reported to FCDA in fiscal year 1956. The data are arranged by FCDA Region and State. While the list is not necessarily complete, it does indicate the nature of the exercises conducted.



## EXERCISES REPORTED

## By Region

Location	Operation name and date	Object or description	Area or facilities involved	Approximate number of participants	Time
REGION 1					
Connecticut: Winsted..... Greenwich..... Guilford.....	CPX, May 7, 1956. Control Center Demonstration, May 20, 1956. "Emergency Mass Feeding," May 20, 1956.	Train control center operational staff. Demonstrate operations of a control center to the general public. Demonstrate mobilization ability for mass feeding of 100 or more persons on short notice.	Local control center. Greenwich Auditorium setup as control center. Guilford.....	18..... 800..... 125.....	3 hours. 2½ hours. 2½ hours.
State of Connecticut.  Do..... Newington.....	"Communications Drill," Friday, once per month.  CPX, every 2d Monday each month. Test run.....	Training of radio and other communications personnel in control center operations. Training staff at all levels in control center operations and problem solution. Trial run to test evacuation route, Newington to Cromwell. Also test of communications.	Area and local control centers.  60 towns..... Newington and Guilford.....	250 per drill.....  300-500 per test..... 15.....	Do.  2 hours monthly. 3 hours.
Maine: Limestone.....  State of Maine.....	"Evacuation," June 4, 1956. "Test Alert," June 13, 1956.	Evacuation of dependents from Air Force Base to Caribou, Fort Fairfield, and Limestone. To test effectiveness of the Air Raid Warning system of the entire State, operating quality of new sirens, and to provide the public an opportunity to hear the yellow and red alarms.	Loring Air Force Base.....  Statewide.....	1,200 dependents (250 autos).  80,000 civil defense volunteers.	1 day.
Hancock and Waldo Counties.  Massachusetts: State of Massachusetts.	"Evacuee Reception," June 23, 1956.  "Noah," Aug. 18-31, 1955.	To rehearse reception procedures at local and county levels and test evacuation routes.  Flood emergency presented opportunity to test existing natural disaster plans and procedures.	Cities and towns in Hancock and Waldo Counties.  Statewide.....	500 citizens, 180 civil defense volunteers.  10,431 civil defense workers.	170 hours.
Walham.....  State of Massachusetts.	"Potluck," Sept. 22, 1955.  "Flood Emergency," Oct. 16-18, 1955.	State sponsored emergency disaster feeding demonstration at Waltham Field Station, Massachusetts Extension Service. Flood Alert. Civil defense areas on standby status—tested natural disaster alert procedure.	Area sector staffs.....  Area sector staffs.....	300.....  75 civil defense staff workers.	20 minutes to feed participants. 63 hours.



Turow	"Cape Cod," Oct. 29, 1955.	State sponsored test of evacuation and feeding in cooperation with Provincetown Red Cross Medical Unit. The "evacuees" were supposedly taken off the Cape and fed.	Barnstable County	150	
State of Massachusetts.	"Doubleheader," Mar. 19-20, 1956.	Two successive blizzards causing widespread disruption of transportation and supply afforded an opportunity to test new civil defense organization in natural disaster. Headquarters was placed on an alert—shelters, cots, blankets, and services (including auxiliary police and firemen) were provided.	Statewide	400 civil defense staff, 1,500 volunteers.	23 hours.
Do.	"Communications Test," May 7, 1956.	To test civil defense communications at State, area, and local levels.	do	300 civil defense staff.	2 hours.
Do.	"Lexington," June 4, 1956.	Control center exercise: to rehearse operational procedures and to train in communications techniques.	do	2,000 civil defense staff and volunteers.	2½ hours.
Do.	"Bunker Hill," June 25, 1956.	Control center exercise: involving control centers at all levels; continuation of Operation Lexington.	do	do	Do.
Do.	"Communications Test," July 1, 1955 through June 30, 1956.	Communications tests held at area and sector levels.	do	50 civil defense staff and volunteers.	Weekly.
New Hampshire: Merrimack.	Apr. 4, 1956.	To train local civil defense personnel in all phases of welfare services.	Town Hall simulated as welfare center.	30 civil defense workers, 50 townspeople.	1 day.
Andover	Apr. 5, 1956.	To train mobile support in civil defense welfare services.	School facilities.	150 civil defense volunteers.	½ day.
Hudson	Apr. 7, 1956.	To train civil defense volunteers in emergency welfare services.	Town library.	30 civil defense volunteers.	Do.
Concord	Apr. 10-13, 1956.	Public health training in civil defense.	State House.	50	4 days.
Nashua	Apr. 14, 1956.	To train civil defense volunteers in civil defense welfare services.	YMCA Hall.	60	
Hudson	Apr. 21, 1956.	Training exercise involving all civil defense welfare services.	Local school.	30 civil defense workers, 150 townspeople.	
Nashua	May 26, 1956.	Practice exercise involving all welfare services.	Junior high school facilities.	60 welfare volunteers, 150 townspeople.	6 2-hour courses.
Portsmouth	May 29-June 27, 1956.	Radiological defense training.	do	16	4 3-hour courses.
Littleton	July 9-12, 1956.	do	do	30	Single briefing sessions.
State of New Hampshire.	July 1, 1955-June 30, 1955.	Operations officers' instruction and orientation meeting with new civil defense directors.	40 communities.	100	



## EXERCISES REPORTED—Continued

Location	Operation name and date	Object or description	Area or facilities involved	Approximate number of participants	Time
Region 1—Continued					
New Jersey: State of New Jersey	"Muster" week of Oct. 23, 1955.	To test operational training efficiency in a statewide mobilization of all the State forces. Personnel and equipment were moved to mobilization points, support role being stressed. National Guard was mobilized. Pedestrians were instructed to take shelter during public participation phase.		252,000 civil defense volunteers, 15,000 National Guard.	1 week.
Do	"Surprise," Feb. 23, 1956.	To test the attack warning communications system; to implement and test control center mustering plans at all levels; to activate and test adequacies of control center staffs on short notice and evaluate efficiency of local plans designed to alert key agencies and industries.	Statewide.	21 counties, 567 municipalities.	1 day.
Do	"May Day," May 1, 1956.	To test air defense warning network and ability of public to follow instructions. To afford opportunity for every municipality to test their civil defense plans and organization.	do.	21 counties, 460 municipalities, 236,000 participants.	Do.
Do	Local tests.	Many municipalities and counties had local tests during the year to test plans and organization.			
New York: Yates County	July 15-16, 1955.	Evaluation of support area training.	Support area for city of Rochester.	500.	2 days.
Orleans County	Aug. 13, 1955.	To test public participation in an air raid alert at Junior Fair in Albion, the county seat.			10 minutes.
Lockport	Aug. 19-20, 1955.	Evaluation of support area training.	Support area for city of Niagara Falls.	500.	2 days.
Rensselaer	Sept. 9-10, 1955.	do.	Support area for city of Troy.	500.	Do.
Albany and Rensselaer	Sept. 23, 1955.	Test exercise and recruiting.			
Jamesstown	Oct. 7-8, 1955.	Training exercise for support area participation.			
Plattsburg	Oct. 14-15, 1955.	Evaluation of support area training.	Support area for city of Plattsburg.	500.	2 days.
Auburn	Oct. 28-29, 1955.	do.	Support area for city of Syracuse.	500.	Do.



Do.....	Oct. 29, 1955.....	To test plans for evacuation of patients from County Home.	Support area for New York City.	35 patients.	Do.
White Plains.....	Nov. 4-5, 1955.....	Evaluation of support area training.		500.....	Do.
Washington County.....	Nov. 13, 1955.....	Training.			
Middletown.....	Nov. 17, 1955.....	Citywide participation in a test exercise and training of civil defense workers.			
Chautauque County.....	Nov. 18-19, 1955.....	Evaluation of support area training.	Support area for city of Buffalo.	300.....	Do.
White Plains.....	Nov. 25-26, 1955.....	To test emergency service in a public alert.			1 day.
Tompkins County.....	Mar. 29, 1956.....	Evaluation of support area training.	Support area for city of Binghamton.	500.....	Do.
State of New York.....	Apr. 19, 1956.....	Training personnel from the New York State Division of Veterans Affairs and volunteers of the New York State Civil Defense Commission in Message Center.	New York State Civil Defense Commission Headquarters.	40.....	Do.
New York City.....	Apr. 28, 1956.....	Evaluation of all training held throughout New York City.	New York City.....	300.....	Do.
Monroe County.....	May 2, 1956.....	Evacuation test.			Do.
Rockland County.....	May 6, 1956.....	Evaluation of support area training.	Support area for city of Rochester.	500.....	Do.
State of New York.....	May 17, 1956.....	Training volunteers from New York State Department of Public Works and New York State Civil Defense Commission in Commissions Message Center.	Support area for New York City.	500.....	Do.
Tompkins County.....	May 19, 1956.....	Evaluation of support area training.	Interim Control Center of New York State Commission.	75.....	Do.
Tioga County.....	May 26, 1956.....	do.....	Support area for city of Binghamton.	500.....	Do.
Chenango County.....	June 16, 1956.....	do.....	do.....	750.....	Do.
Seneca County.....	June 27, 1956.....	do.....	Support area for city of Rochester.	300.....	Do.
In addition to the above exercises there have been numerous local exercises in New York State, some supervised by State officials and others carried on solely by local people. From July 1, 1955, through June 30, 1956, New York City had 1,709 such exercises unsupervised by the State and there were 617 similar exercises in other parts of the State. Most of these exercises lasted about 3 hours and were designed for the training of people assigned to some specific civil defense service. The total number of participants is not available. Service chiefs in the State Civil Defense Commission directed a number of exercises also for the training of people in their particular services with the number of participants ranging from 10 to 600.					
Rhode Island:					
State of Rhode Island.....	July 1, 1955, through June 30, 1956.	Forty-eight exercises were held in the State of Rhode Island for the purpose of training people in communications, rescue, fire fighting, welfare, radiological, police, and medical services.	State and local areas.....	166.....	
Vermont:					
Bellevue Falls.....	"Bellwind," May 24, 1956.	To train civil defense volunteers and the general public, by rehearsing operational procedures in evacuation of city under radioactive fallout conditions; to test evacuation routes, mass transportation, reception, registration, mass feeding, communications, and emergency hospital procedures.	Bellevue Falls, Windsor and Chester, Vt.	500 civil defense volunteers, 2,000 others.	4 hours.



## EXERCISES REPORTED—Continued

Location	Operation name and date	Object or description	Area or facilities involved	Approximate number of participants	Time
REGION 2					
Maryland: Baltimore County	"Operation Seascope," Aug. 27, 1955.	Evacuation of people, using 60 small boats. Civil defense welfare, medical, fire, and police services were activated for exercise.	Area surrounding Glenn L. Martin plant.	900	
REGION 3					
Florida: Orlando	Dec. 12, 1955.	To test evacuation of schools.	5 schools	2,000	15 minutes.
Do	Jan. 31, 1956.	Evacuate Ferncreek Elementary School.	1 school	726 pupils	14 minutes.
Daytona Beach, Volusia County.	Feb. 9, 1956.	To test time to mobilize and train fixed support team.	3 command posts	207	3 minutes.
Orlando	Feb. 15, 1956.	Evacuate Concord Park Elementary School.	1 school		
Georgia: Atlanta	School evacuation exercise 1956, Apr. 24, 1956.	Evacuate all school children in Atlanta.	183 schools	30,000	
Savannah	"Operation Box Car II," May 17, 1956.	Evacuate all Savannah school pupils by railroad and automobiles, pupils walking to railroad yards.	51 schools	36,000 pupils, 1,500 box cars.	30 minutes.
North Carolina: Charlotte	Nov. 9, 1955.	Evacuate uptown business district, walking to loading areas.	Offices and stores in 14 blocks.	20,000	25 minutes.
REGION 4					
Illinois: Peoria	Feb. 26, 1956.	Radiological monitoring and decontamination demonstration for "simulated" evacuees from fallout area. Lectures on radioactive fallout hazards and protective measures.		150	1 day.
Springfield	June 24, 1956.	Evacuate participants in civil defense meeting at State Office Building to State Fair Grounds because of simulated "Fallout Area." Mass feeding demonstration conducted for participants at reception area.	State Office Building	250	Do.



Indiana: Evansville.....	"Operation Good Neighbor," Mar. 10, 1956.	Evacuate 120 patients and 8,000 pieces of furniture from old St. Mary's Hospital across the city to new St. Mary's Hospital using 110 trucks and truck trailers.	1 complete hospital with patients and equipment.	700.....	1 day.
Michigan: Muskegon.....	July 19-20, 1955.	Mass feeding school with construction of field expedients and lectures on sanitation and radiological fallout.		80.....	2 days.
Grand Rapids.....	Sept. 24, 1955.	Feeding demonstration sponsored jointly by Boy Scout troops and local civil defense agency.		300.....	1 day.
Battle Creek.....	Sept. 30 and Oct. 1, 1955.	Feeding demonstration for instructors, sponsored by FCDA region 4, with construction of field expedients, lectures on sanitation, water supply, radiological fallout, mess layouts, and foods to serve.		80 in instructor's course.	2 days.
Albion.....	"No Second Chance," Jan. 10, 1956.	General Demonstration. Sirens sounded alert of simulated attack. Schools evacuated; radio station simulated CONELRAD broadcast, fire, rescue, and first aid teams reported for duty. National Guard participated.	Speech Department of Albion College, Calhoun County Civil Defense organization.	4,000.....	1 day.
Wisconsin: Milwaukee.....	June 9, 1956.	Evacuees from Milwaukee reported to reception area (State Fair Grounds, West Allis, Wis.) Demonstration in registration, information, and mass feeding, including construction of field expedients, lectures on sanitation, water supply, and radiological contamination.		300.....	1 day.

## REGION 5

Arkansas: Cammack Village Springdale.....	Oct. —, 1955 April 1956.	To test evacuation plans. The town of Springdale served as a reception area for 10,000 to 15,000 simulated evacuees from surrounding area.			
New Mexico: Los Alamos.....	May 2, 1956.	Entire city was evacuated to a point 8 miles away.	City of Los Alamos		
Texas: Pasadena.....	"Operation Recess," Dec. 7, 1955.	School children were evacuated from the town.	Schools	1,300	
Carswell AFB.....	June 1956.	In a surprise alert, entire base, including civilian employees. Military personnel and critical equipment were evacuated to a relocation site.	Carswell AFB.		



## EXERCISES REPORTED—Continued

Location	Operation name and date	Object or description	Area or facilities involved	Approximate number of participants	Time
REGION 6					
Colorado:					
Denver:	Sept. 12, 1955	Evacuation and treatment of simulated victims from bomb area and movement to emergency field hospital.		140	3 hours.
Iowa:					
Des Moines:	Nov. 16-17, 1955	Instructor's course on construction of field expedients, lectures on sanitation, food contamination, water supply, radiological fallout, mess layouts, and foods to serve.		87 in instructor's course.	2 days.
REGION 7					
Oregon:					
Portland:	"Green Light," Sept. 27, 1955.	Evacuate people by autos to reception center, practice for registration, and simulated mass feeding operation.	6 square miles.	100,000	40 minutes.
Washington:					
Pierce County:	July 3, 1955	Evacuation of 30 carloads of people to another part of the county, following established evacuation routes. Evacuees remained overnight, furnishing their own food, bedding, and supplies.	Cities of Tacoma and Eatonville.	125 (30 cars)	
TERRITORIES AND POSSESSIONS					
Puerto Rico:					
Ramsey AFB:	Feb. 24, 1956	Evacuate civil and military personnel and families to reception areas.	Air Force base.		



## STOCKPILING

The Federal Civil Defense Act of 1950 authorizes the FCDA administrator to "procure by condemnation or otherwise, construct, lease, transport, store, maintain, renovate or distribute materials and facilities for civil defense," \* \* \*. Under this authorization FCDA has proceeded to buy and store large quantities of emergency supplies and equipment for use in time of need.

Congressional appropriations available for this program have totaled \$172,148,000 through fiscal year 1956. Through June 30, 1956, about \$170,000,000 of these funds had been obligated—approximately \$163,000,000 for medical supplies and equipment and nearly \$7,000,000 for engineering supplies. No engineering supplies were purchased under this program in fiscal years 1954 and 1955. Small amounts were ordered in fiscal year 1956 and additional funds were spent for maintenance and relocation of equipment purchased in former years.

Contracts were awarded for about \$170,000,000 worth of materials. Materials costing approximately \$144,000,000 had been delivered by June 30, 1956.

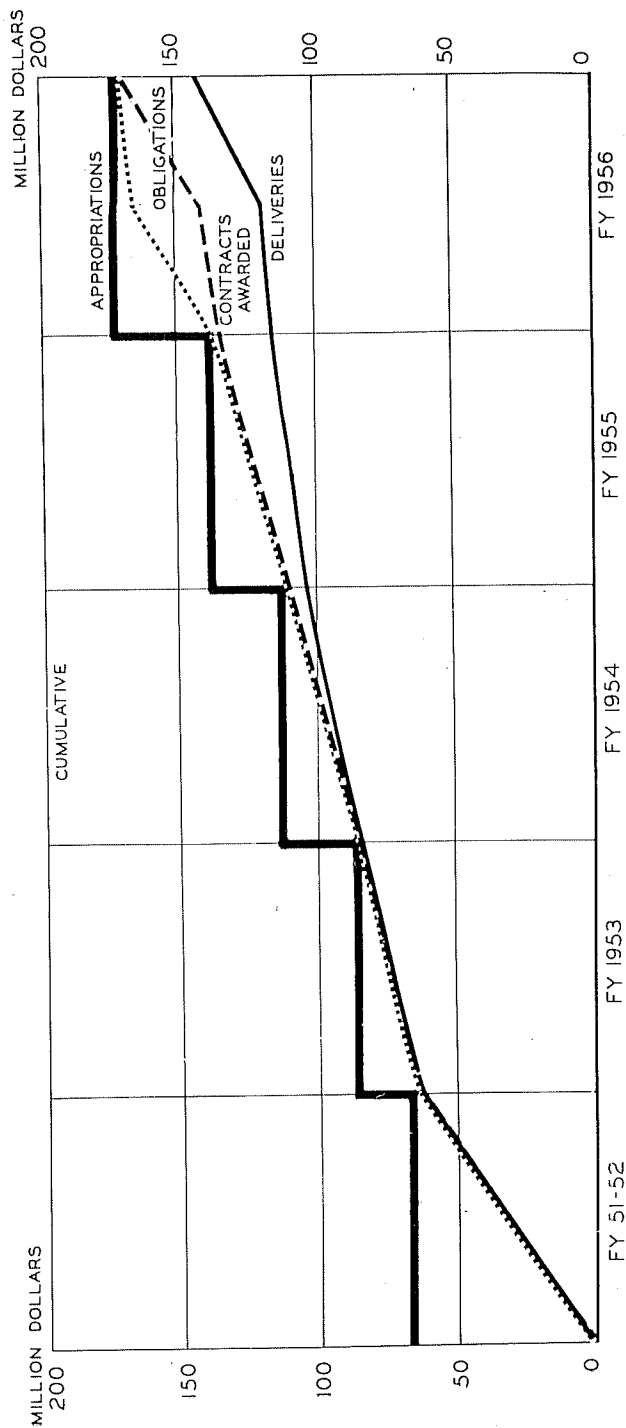
### STATEMENT AS OF JUNE 30, 1956

Description	Program		Total
	Medical supplies and equipment	Engineering supplies	
<b>Appropriations:</b>			
Fiscal year 1951-52.....			\$66,400,000
Fiscal year 1953.....			20,000,000
Fiscal year 1954.....			27,500,000
Fiscal year 1955.....			26,000,000
Fiscal year 1956.....			132,248,000
<b>Total.....</b>			<b>172,148,000</b>
<b>Funds obligated:</b>			
Fiscal year 1951-52.....	\$60,095,244	\$5,563,537	65,658,781
Fiscal year 1953.....	18,572,849	999,316	19,572,165
Fiscal year 1954.....	27,005,355	210,951	27,016,306
Fiscal year 1955.....	25,674,800		25,674,800
Fiscal year 1956.....	31,774,126	132,116 267,439	32,173,681
<b>Total.....</b>	<b>163,122,374</b>	<b>6,973,359</b>	<b>170,095,733</b>
<b>Contracts awarded:</b>			
Fiscal year 1951-52.....	60,095,244	5,563,537	65,658,781
Fiscal year 1953.....	18,572,849	999,316	19,572,165
Fiscal year 1954.....	27,005,355	210,951	27,016,306
Fiscal year 1955.....	25,674,800		25,674,800
Fiscal year 1956.....	31,760,126	132,116 267,439	32,168,681
<b>Total.....</b>	<b>163,117,374</b>	<b>6,973,359</b>	<b>170,090,733</b>
<b>Deliveries:</b>			
Fiscal year 1951-52.....	59,917,266	5,544,979	65,462,245
Fiscal year 1953.....	18,379,480	982,497	19,361,977
Fiscal year 1954.....	26,974,223	210,951	26,985,174
Fiscal year 1955.....	21,176,488		21,176,488
Fiscal year 1956.....	10,907,698	175,514	11,083,212
<b>Total.....</b>	<b>137,355,155</b>	<b>6,713,941</b>	<b>144,069,096</b>

<sup>1</sup> Original appropriation was \$32,650,000. However \$402,000 was transferred to other appropriations—\$362,000 for FCDA operations and \$40,000 for civil defense functions of other Federal agencies.



FIGURE 11.—STOCKPILING  
APPROPRIATIONS VS. OBLIGATIONS





## Procurement

For fiscal year 1956 FCDA had an appropriation of \$32,248,000. (The original appropriation was \$32,650,000 but \$402,000 was transferred to other appropriations—\$362,000 for FCDA operations and \$40,000 for civil defense functions of other Federal agencies.) Essentially all of these funds were obligated in fiscal year 1956. Over \$18 million went for the procurement of emergency hospitals and for backup reserves of medical supplies and equipment. Nearly \$5 million went into the blood and shock therapy program, nearly \$4½ million went for radiological defense items and smaller amounts for other programs as shown in the following table. About \$2.4 million was required for transportation, procurement service, maintenance of the engineering stockpile, packaging, and other miscellaneous expenses.

### FUNDS OBLIGATED—Fiscal Year 1956

Item	Quantity	Cost	Total
Casualty care:			
Emergency hospitals.....	200	\$3,737,023	
Backup reserves.....	( <sup>1</sup> )	14,363,654	\$18,100,677
Biological warfare and disease control:			
Immunizing and treatment doses.....	28,220,000	1,892,410	1,892,410
Blood and shock therapy:			
Whole blood sets.....	565,200	932,160	
Plasma expanders.....	500,000	910,000	
Intravenous solutions (liters).....	4,593,124	1,696,549	
Nasogastric feedings.....	1,612,614	833,631	
Associated items.....		491,708	4,864,048
Chemical warfare defense:			
Atropine (dose).....	4,511,600	108,986	
Associated items.....		318,100	427,086
Radiological defense:			
Dosimeters.....	279,447	1,597,423	
Survey meters.....	104,408	2,720,502	
Associated Items.....		164,181	4,482,106
Miscellaneous:			
Transportation, procurement service, maintenance of engineering stockpile, etc.....		2,407,354	2,407,354
Total funds obligated.....			32,173,681
Unobligated balance.....			74,319
Grand total.....			32,248,000

<sup>1</sup> Sufficient for 3 weeks, care of 1,000,000 casualties.

### Procurement of Selected Items

Stockpiling of a large number of items of medical supplies and equipment has been in progress almost since the creation of FCDA. With continued changes in the destructive power of nuclear weapons and in the ability of potential enemies to deliver them, it has become practically impossible to estimate with any degree of accuracy the



number of casualties which may result from a mass attack. Consequently it is impossible to establish meaningful requirements for such an eventuality. However, some progress has been made in procuring a large number of items which, in the judgment of FCDA officials, form a balanced program to take care of the most likely needs, in the event of attack.

Progress in the procurement of some of the more important selected items is shown in the following table. The number of items ordered and the number delivered relate to the entire period from the beginning of the program to June 30, 1956.

There is of necessity a sizable lag between orders and deliveries of most items. Deliveries of several items have kept pace reasonably well with orders, but in some cases deliveries are far behind. Only 201 of the 932 emergency hospitals ordered had been completely assembled and delivered ready for immediate use. The completion of one of these units requires the procurement and assembly of large numbers of individual items, followed by sorting, packaging, and grouping of the items in the unitization process. Although 32,500 gas masks had been ordered, none of them had been delivered by June 30, 1956.

### PROCUREMENT PROGRESS—SELECTED ITEMS

Item	Unit of measure	Ordered number <sup>1</sup>	Delivered number <sup>1</sup>
Civil defense emergency hospitals.....	Each.....	932	201
Burn dressings (large and small).....	do.....	8,495,000	7,784,972
Blood recipient sets.....	do.....	2,625,140	2,089,596
Blood derivatives (plasma and serum albumin).....	Unit.....	1,591,427	1,510,013
Plasma expanders (PVP and dextran).....	do.....	4,294,146	3,770,277
Gas masks.....	Each.....	32,500	-----
Radiological dosimeters.....	do.....	344,000	102,624
Radiological survey meters.....	do.....	124,593	30,020
Atropine.....	Dose.....	637,036	500,000
Vaccines and antitoxins.....	do.....	54,412,500	<sup>2</sup> 26,080,000
Paper blankets.....	Each.....	1,597,611	1,584,555
Litters.....	do.....	227,402	152,900

<sup>1</sup> From beginning of program to June 30, 1956.

<sup>2</sup> Stored in custody of manufacturers.

### Distribution of Radiological Instruments

In appropriating FCDA stockpiling funds for fiscal year 1956 the Congress (in Public Law 112, 84th Cong.) provided for the procurement of radiological instruments and detection devices by the Federal Civil Defense Administrator, and for the distribution of such instruments and devices to the several States and Territories, by loan or grant, for training and educational purposes, under such terms and conditions as the Administrator shall prescribe.

Under this authority FCDA proceeded to buy substantial quantities of radiological instruments and to make them available to the States



indicating a need for them on the basis of training programs and scheduled courses meeting standards approved by FCDA. Certain equipment has been granted to each State for continuing use, and additional quantities are loaned to States scheduling concurrently more than one training course.

As of June 30, 1956, FCDA had granted to the States 6,672 dosimeters, 713 dosimeter chargers, and 6,379 survey meters. On loan to the States were 417 dosimeters, 190 chargers, and 3,133 survey meters.

### RADIOLOGICAL INSTRUMENTS LOANED OR GRANTED TO STATES

Region and State	Dosimeters		Dosimeter chargers		Survey meters	
	Loan	Grant	Loan	Grant	Loan	Grant
Grand total.....	417	6,672	190	713	3,133	6,379
Total—Continental United States..	417	6,668	190	708	3,121	6,319
Region 1.....	146	3,440	39	284	173	3,571
Connecticut.....		320		163		370
Maine.....		600		9		650
Massachusetts.....		1,400		18		1,450
New Hampshire.....		200		11	25	276
New Jersey.....		800		20	50	509
New York.....	116		30		78	146
Rhode Island.....		120		63		170
Vermont.....	30		9		20	
Region 2.....	183	672	18	44	670	972
Delaware.....					26	
District of Columbia.....		12		9	9	62
Kentucky.....		4		5		54
Maryland.....	31	200	8	5	60	250
Ohio.....	152	400	10	10	214	450
Pennsylvania.....		24		15	300	74
Virginia.....		32			42	82
West Virginia.....					19	
Region 3.....					11	
Alabama.....						
Florida.....						
Georgia.....						
Mississippi.....					4	
North Carolina.....						
South Carolina.....					7	
Tennessee.....						
Region 4.....	20	628	118	270	1,568	798
Illinois.....		500		245	88	600
Indiana.....		28		17		78
Michigan.....	4	20		5	71	70
Missouri.....	12		75	3	1,295	50
Wisconsin.....	4	80	43		114	
Region 5.....	38	28	8	20	92	78
Arkansas.....	10	28	2	20	60	78
Louisiana.....					12	
New Mexico.....	4					
Oklahoma.....	24		6		20	
Texas.....						



## RADIOLOGICAL INSTRUMENTS LOANED OR GRANTED TO STATES—Continued

Region and State	Dosimeters		Dosimeter chargers		Survey meters	
	Loan	Grant	Loan	Grant	Loan	Grant
Region 6.....	6	320	4	47	253	670
Colorado.....	2	44	1	5	2	144
Iowa.....					26	
Kansas.....		32	3	19	61	82
Minnesota.....	4				44	50
Nebraska.....		200			50	250
North Dakota.....		4			10	54
South Dakota.....					10	
Wyoming.....		40		23		90
Region 7.....	24	1,580	3	43	404	230
Arizona.....					5	
California.....	12	1,500	3	3	80	150
Idaho.....					5	
Montana.....	4				5	
Nevada.....					25	
Oregon.....		80		40	264	80
Utah.....					5	
Washington.....	8				15	
Territories and possessions.....		4		5	12	60
Alaska.....						
American Samoa.....						
Canal Zone.....						
Guam.....						
Hawaii.....		4		5	8	54
Puerto Rico.....					2	6
Virgin Islands.....					2	

### Prepositioning of Civil Defense Emergency Hospitals

In June 1956, FCDA announced a new program for distribution of civil defense emergency hospitals. The objective is to store these 200-bed hospitals at strategic points throughout the country in or near facilities which can be converted to hospital use in an emergency.

The plan is designed for the safe permanent storage of a hospital in unopened original containers at or near the place of eventual usage where it can be unpacked and put into operation with a minimum of delay in the event of an emergency. Storage sites are to be not closer than 15 miles to a Critical Target Area nor farther than 50 miles from the area to be supported. At least 15,000 square feet of acceptable space must be available for hospital operations. Actual storage space required for the packaged hospital is slightly over 1,800 cubic feet.

The plan is to be implemented through formal agreements with the States. Each State may obtain one or several of these hospitals for storage within its borders by signing an agreement with FCDA under which the State accepts responsibility for adequate custodial, maintenance, and protective care according to established criteria. All acquisition and delivery costs are borne by the Federal Govern-



ment. Subsequent costs for storage, care, and protection are borne by the State. Title to the property remains with the Federal Government.

It is the responsibility of the State to develop plans for the utilization of the hospitals during a civil defense emergency. Such plans are coordinated and approved by FCDA. Under terms and conditions prescribed by FCDA the hospitals may be made available for use in a natural disaster following declaration of a major disaster by the President under Public Law 875, 81st Congress.

### Civil Defense Emergency Hospitals on Loan to States

During late 1955 and early 1956, a program was developed for distributing emergency hospitals to the States for purposes of display, education, and training.

Principal objectives are to develop in the field an understanding of techniques, requirements, and staffing patterns for setting up these hospitals in event of emergency. A State can obtain one or more of these hospitals by signing a formal loan agreement under which it accepts custody of the hospital for civil defense display, educational, and training purposes, agrees to pay charges for transportation from one city to another within the State, and accepts responsibility for loss or damage to the hospital or any of its components. Under this arrangement one-half the costs to a State may be returned under the Federal contributions program.

A total of 50 civil defense emergency hospitals has been set aside or approved for loan to the States for training and display purposes. As of June 30, 1956, 35 hospitals had actually been distributed to the States or shipment arrangements were in process. Initial destinations were as follows:

#### *Region 1*

Torrington, Conn.  
Somerville, N. J.  
Providence, R. I.  
Barre, Vt.

#### *Region 2*

Wilmington, Del.  
Washington, D. C.  
Sykesville, Md.  
Chillicothe, Ohio  
Altoona, Pa.  
Butler, Pa.  
Reading, Pa.  
Charleston, W. Va.

#### *Region 3*

Atlanta, Ga.  
Memphis, Tenn.

#### *Region 4*

Indianapolis, Ind.  
Detroit, Mich.  
Rolla, Mo.

#### *Region 5*

Baylor, Tex.  
Houston, Tex.

#### *Region 6*

Greeley, Colo.  
Cedar Rapids, Iowa



*Region 6—Continued*  
 Topeka, Kans.  
 Moose Lake, Minn.  
 Oak Terrace, Minn.  
 Omaha, Nebr.

*Region 7*  
 Chandler, Ariz.  
 San Francisco, Calif.  
 Boise, Idaho  
 Warm Springs, Mont.

*Region 7—Continued*  
 Reno, Nev.  
 Salem, Oreg.  
 Salt Lake City, Utah  
 Seattle, Wash.

*Territories and possessions*  
 Honolulu, Hawaii

*Other*  
 Arnprior, Ontario, Canada

## Warehousing

Most of FCDA's stockpiled materials are stored in 38 medical warehouses and at 32 engineering storage sites in Continental United States. Small quantities of medical supplies are in two warehouses in Hawaii and Puerto Rico. In addition, blood serums are stored in commercial cold storage warehouses in 18 cities, and vacancies are stored in several manufacturers' cold storage facilities.

Requirements for medical warehousing space have increased continuously over the years. As of June 30, 1956, total warehousing space available for this program was about 16,746,000 cubic feet. Of this amount 11,621,000 cubic feet were scheduled for occupancy.

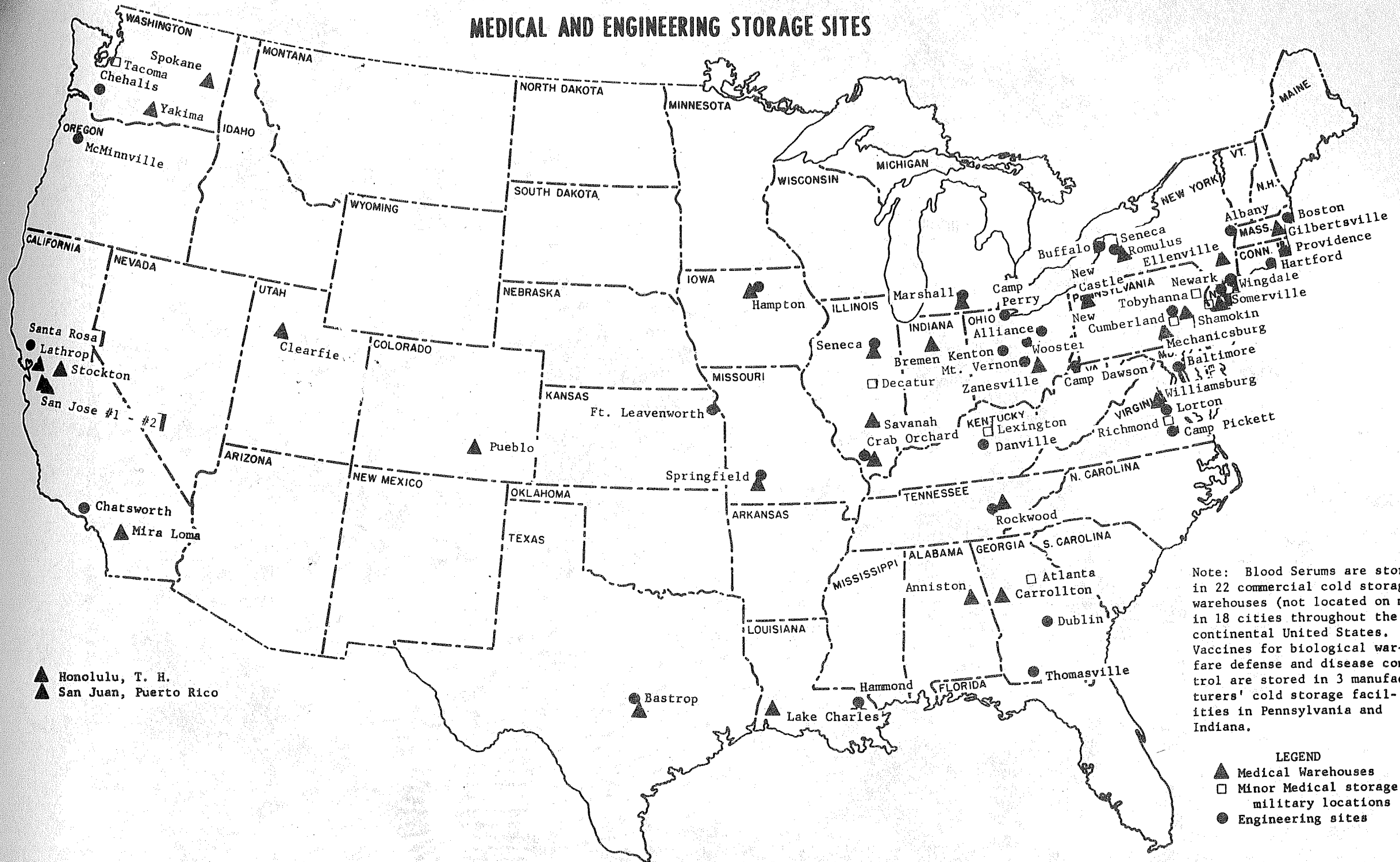
Medical supplies and equipment are stored generally outside of Critical Target Areas but scattered through the country and near enough to large concentrations of people to be accessible in an emergency. Some of the warehouses are filled beyond normal capacity while others, acquired more recently, have a considerable amount of space. Figure 14 indicates the extent of space occupied in the individual facilities as of May 31, 1956, and the space scheduled for occupancy by June 30, 1956.

## FINANCIAL AID TO STATES AND CITIES

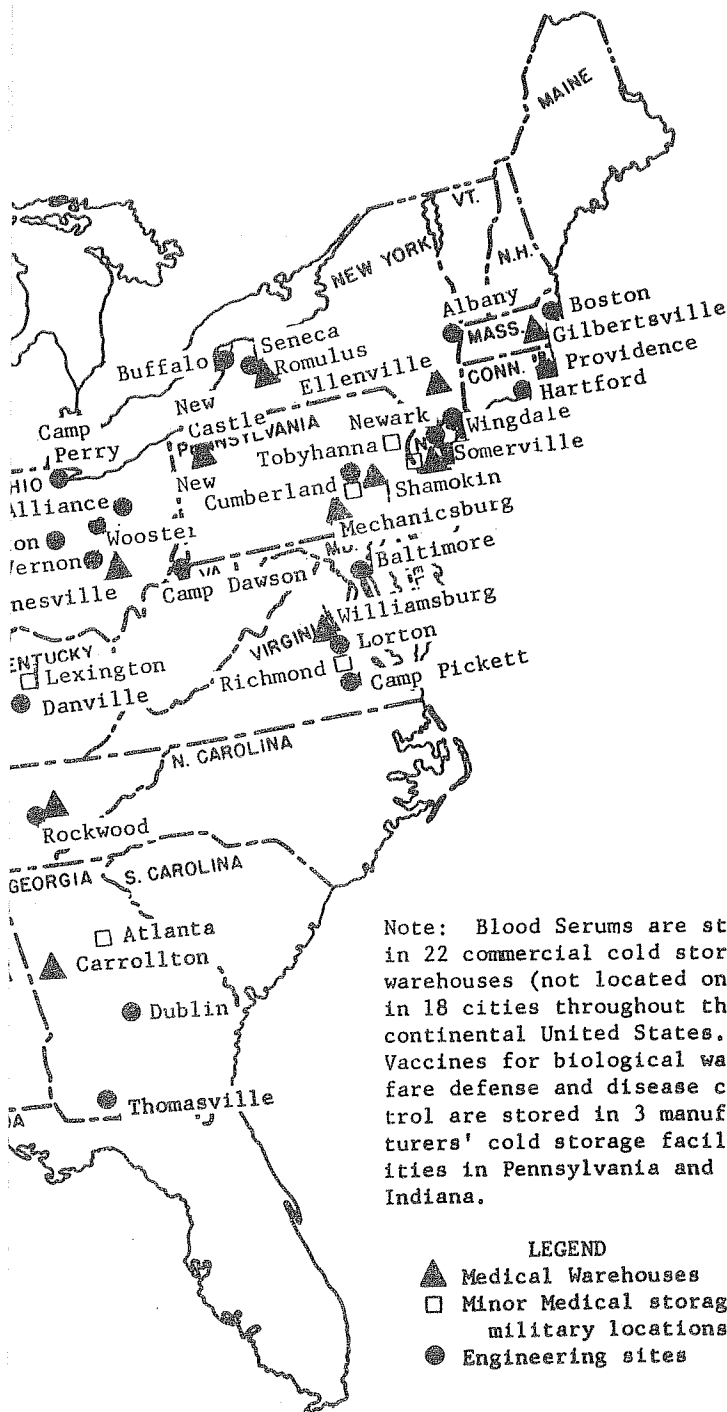
The purpose of the Federal contributions program is to help the States and their political subdivisions to acquire essential civil defense material and equipment and help them promote civil defense education and training. The program operates under authority of the Federal Civil Defense Act of 1950 (Public Law 920, 81st Cong.) which authorized the Administrator of FCDA to make financial contributions to the States for civil defense purposes on the basis of programs and projects approved by the Administrator.



# MEDICAL AND ENGINEERING STORAGE SITES







Note: Blood Serums are stored in 22 commercial cold storage warehouses (not located on map) in 18 cities throughout the continental United States. Vaccines for biological warfare defense and disease control are stored in 3 manufacturers' cold storage facilities in Pennsylvania and Indiana.

#### LEGEND

- ▲ Medical Warehouses
- Minor Medical storage at military locations
- Engineering sites



Figure 13.—MEDICAL WAREHOUSING—Total

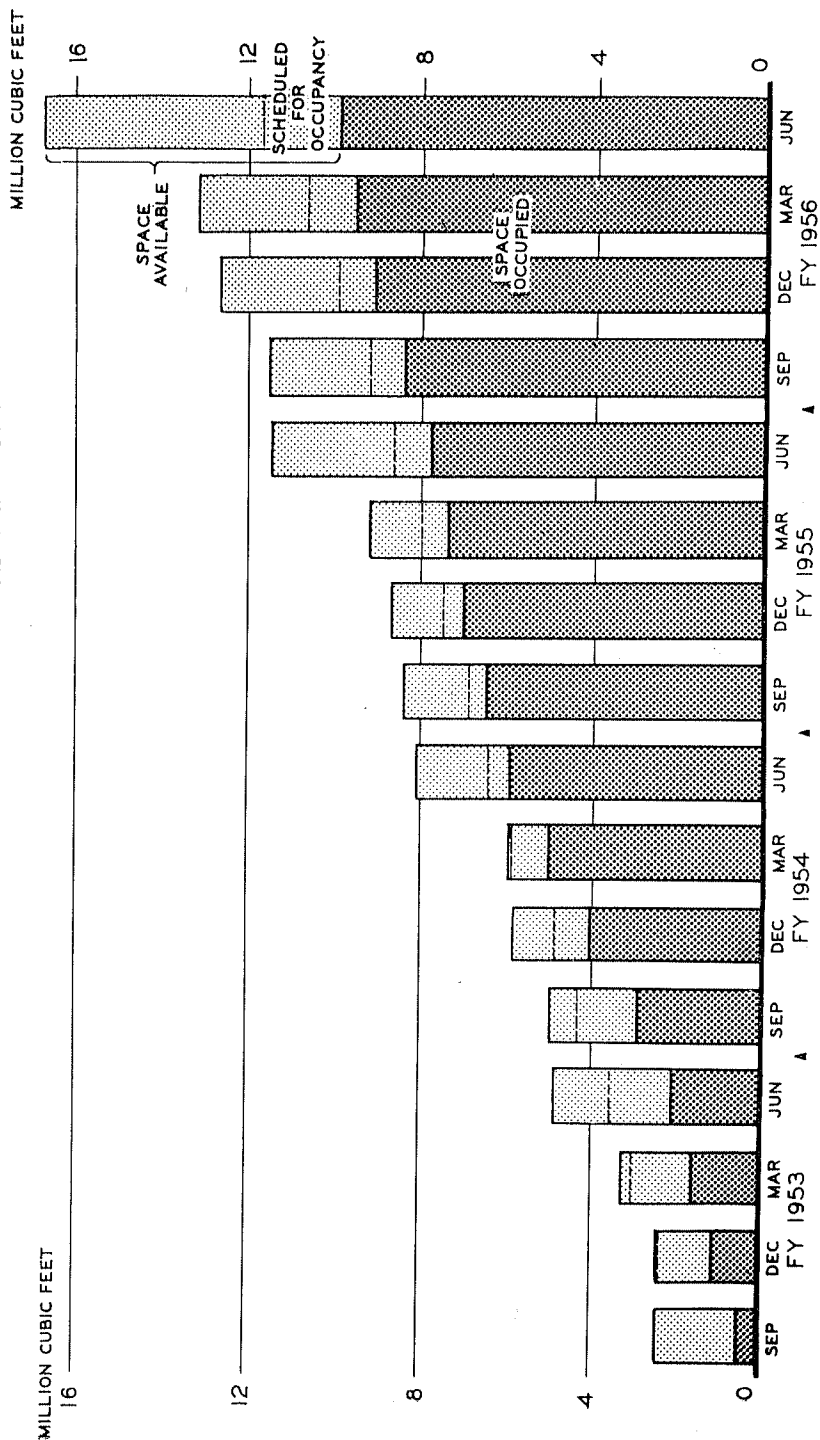
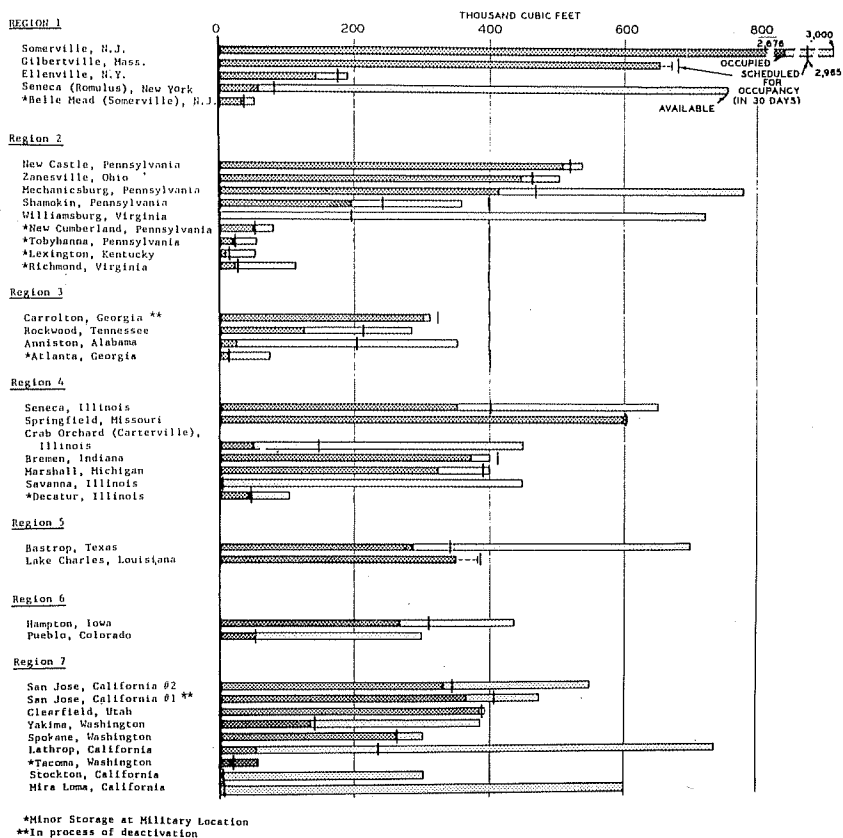




FIGURE 14.—Medical Warehousing—Storage—By Facility



The contributions program became operative in fiscal year 1952. Appropriations by Congress for the program have been as follows:

Available for use in fiscal year(s)	Amount of appropriation
1952	\$22,350,000
1953	15,000,000
1954	10,500,000
1955	<sup>1</sup> 1,300,000
1955-56	12,000,000
1956-57	12,400,000

<sup>1</sup> Reappropriation of unused 1954 funds for use in the attack warning program only in fiscal year 1955.

Federal contributions are made to the States on the basis of individual project applications submitted to and approved by FCDA regional administrators in accordance with uniform programs and standards established by the Agency. All States, Territories, and possessions, except Alaska, are required to match Federal funds on a 50-50 basis. The matching ratio for Alaska is 70 percent Federal and 30 percent local.



The time for using the 1955-56 appropriation expired June 30, 1956. The unused portion of the 1956-57 appropriation is available until June 30, 1957. (Congress has also appropriated \$17,000,000 for the Federal contributions program to be available over the 2-year period, fiscal years, 1957-58.)

Federal contributions or obligations under this program, from its inception through fiscal year 1956, amounted to \$60,442,666. The amount obligated out of each appropriation was as follows:

<i>Fiscal year appropriation</i>	<i>Amount obligated</i>
1952-----	\$20, 808, 382
1953-----	13, 600, 258
1954-----	8, 081, 103
1955 (Reappropriation)-----	1, 132, 059
1955-56-----	11, 828, 000
1956-57-----	4, 992, 204
Total-----	\$60, 442, 666

The first four figures are adjusted for firm contracts, cancellations, and amendments. The last two figures are the totals of project applications approved by the regional administrators through June 30, 1956, prior to entry on the official records of the agency.

## Federal Funds Obligated—By Program

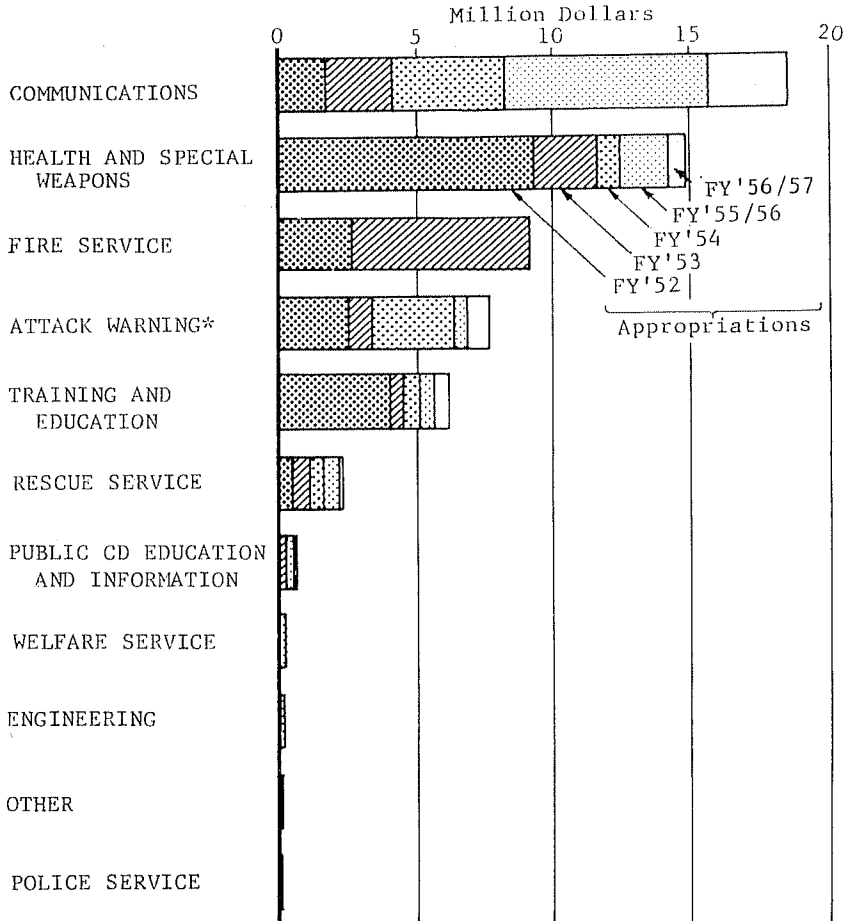
### Fiscal Year 1952 Through Fiscal Year 1956

As shown in the following table, the communications program received over 30 percent of the total funds, and the health and special weapons defense program received nearly 25 percent. Attack warning, fire service, and training and education each received from 10 to 15 percent and the other programs received lesser amounts. The fire service program was in effect only in fiscal years 1952 and 1953.

Program	Federal funds obligated fiscal year 1952 through fiscal year 1956	
	Amount	Percent of total
Total—all programs-----	\$60, 442, 666	100. 0
Attack warning-----	7, 601, 837	12. 6
Communications-----	18, 526, 280	30. 6
Engineering-----	431, 822	. 7
Fire service-----	9, 098, 272	15. 1
Health and special weapons defense-----	14, 901, 883	24. 6
Police service-----	109, 378	. 2
Public civil defense information and education-----	729, 057	1. 2
Rescue service-----	2, 390, 861	4. 0
Training and education-----	6, 184, 093	10. 2
Welfare service-----	290, 018	. 5
Other services-----	179, 165	. 3



FIGURE 15—FEDERAL CONTRIBUTIONS  
By Program



\* Data for FY 1954 include obligations from the reappropriation in FY 1955.

### Federal Funds Obligated—By Region

Fiscal Year 1952 Through Fiscal Year 1956

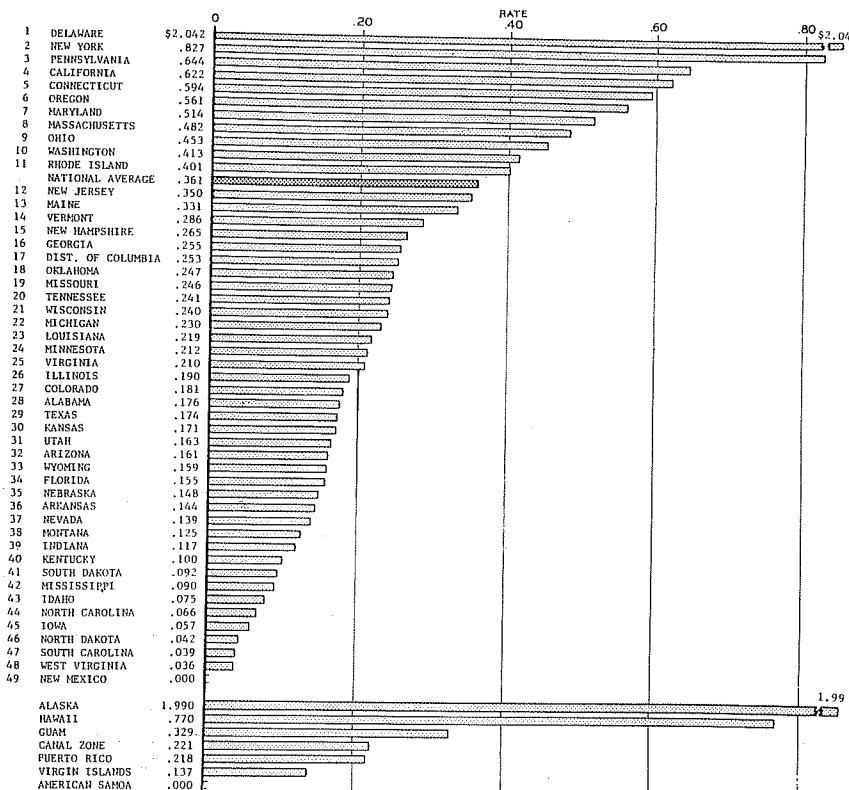
Three-fourths of the total Federal contributions went to the States in FCDA Regions 1, 2, and 7. These are the States with heavy concentrations of population in the northeastern United States and on the west coast. New York, California, and Pennsylvania, in that order, were the three States receiving the largest amounts of Federal funds.



FCDA region	Federal funds obligated fiscal year 1952 through fiscal year 1956	
	Amount	Percent of total
Total	\$60, 442, 666	100. 0
Region 1	19, 870, 573	32. 9
Region 2	14, 747, 776	24. 4
Region 3	3, 376, 637	5. 6
Region 4	5, 844, 348	9. 7
Region 5	2, 925, 820	4. 8
Region 6	1, 800, 497	3. 0
Region 7	10, 541, 429	17. 4
Territories and possessions	1, 335, 586	2. 2

The project applications approved during fiscal year 1956 were from funds which would come out of the 1955-56 appropriation of \$12,000,000 and the 1956-57 appropriation of \$12,400,000.

FIGURE 16  
FEDERAL FUNDS OBLIGATED PER CAPITA\*  
1952 THRU JUNE 1956



\* Based on total Federal Contributions, FY 1952 through June 30, 1956, and U. S. Bureau of the Census estimates of population as of July 1, 1955.



Up to September 30, 1955, each State had been allocated a specified amount out of the 1955/56 appropriation against which project applications could be submitted. It became evident, however, that some States were not going to use all of the funds allotted while others had need of more than their initial allotments. During the second quarter of fiscal year 1956, therefore, FCDA regional administrators were authorized to approve project applications from the States on a first-come first-served basis in order to permit the States, with programs and projects ready, to move forward.

The 1956-57 appropriation of \$12,400,000 became available for obligation as of July 1, 1955. Allocations from this appropriation have been made to each region without specifying amounts available for each State. Regional administrators were authorized to approve applications against this appropriation on a first-come first-served basis within certain limits of maintaining balanced programs and assisting all States in moving ahead with their projects as they became ready.

### Summary—All Programs

In the tables which follow, detailed statistics on the Federal contributions program are presented showing the extent of Federal funds obligated from the inception of the program through fiscal year 1956. Data are given for each program, broken down by FCDA region and State. Data are shown also on the progress of each State in procuring some of the more important items available for procurement in each program.

Region and State	Dollar value of Federal funds obligated (by fiscal year appropriation)					
	Total	1950/57 <sup>1</sup>	1955/56 <sup>1</sup>	1955 <sup>2</sup>	1954 <sup>2</sup>	1953 and 1952 <sup>2</sup>
Total.....	60, 442, 666	4, 992, 204	11, 828, 660	1, 132, 059	8, 081, 103	34, 408, 640
Region 1.....	19, 870, 573	2, 089, 211	3, 570, 070	249, 101	1, 935, 229	12, 026, 962
Connecticut.....	1, 330, 527	202, 792	192, 549	26, 050	207, 763	701, 373
Maine.....	299, 771	46, 040	118, 246	7, 674	54, 808	73, 003
Massachusetts.....	2, 418, 304	327, 487	269, 363	35, 575	187, 033	1, 598, 846
New Hampshire.....	147, 346	35, 670	36, 650	9, 335	27, 252	38, 439
New Jersey.....	1, 894, 953	125, 901	305, 318	17, 035	236, 202	1, 210, 497
New York.....	13, 332, 542	1, 298, 789	2, 660, 636	152, 465	1, 119, 418	8, 195, 234
Rhode Island.....	339, 158	19, 864	50, 062	-----	96, 864	172, 368
Vermont.....	107, 972	32, 668	31, 246	967	5, 889	37, 202
Region 2.....	14, 747, 776	1, 238, 567	3, 454, 541	467, 352	1, 375, 274	8, 212, 042
Delaware.....	790, 079	141, 676	168, 963	26, 927	25, 299	427, 214
District of Columbia.....	215, 985	1, 528	34, 777	7, 000	1, 230	171, 450
Kentucky.....	301, 855	7, 925	159, 931	-----	10, 607	123, 392
Maryland.....	1, 370, 669	132, 218	162, 074	25, 095	145, 866	905, 416
Ohio.....	4, 061, 589	210, 828	1, 275, 230	42, 546	302, 471	2, 230, 514
Pennsylvania.....	7, 182, 828	672, 586	1, 497, 650	332, 237	761, 292	3, 919, 063
Virginia.....	752, 789	38, 042	150, 510	33, 547	115, 500	415, 181
West Virginia.....	71, 982	33, 764	5, 406	-----	13, 000	19, 812

See footnotes at end of table.



Region and State	Dollar value of Federal funds obligated (by fiscal year appropriation)					
	Total	1950/57 <sup>1</sup>	1955/56 <sup>1</sup>	1955 <sup>2</sup>	1954 <sup>2</sup>	1953 and 1952 <sup>2</sup>
Region 3.....	3, 376, 637	324, 722	1, 015, 015	76, 253	651, 989	1, 308, 658
Alabama.....	534, 202	40, 168	134, 799	10, 478	100, 021	248, 736
Florida.....	535, 125	66, 241	200, 381	4, 529	82, 782	91, 192
Georgia.....	923, 065	93, 361	249, 874	18, 020	235, 450	326, 360
Mississippi.....	189, 624	12, 115	77, 020	180	70, 481	29, 828
North Carolina.....	281, 572	80, 863	93, 751	11, 282	39, 571	56, 105
South Carolina.....	89, 326	-----	18, 251	20	61, 886	9, 160
Tennessee.....	823, 723	31, 974	150, 939	31, 744	61, 798	547, 268
Region 4.....	5, 844, 348	371, 771	961, 255	128, 615	1, 266, 906	3, 115, 801
Illinois.....	1, 777, 114	75, 022	139, 911	43, 280	406, 407	1, 112, 494
Indiana.....	505, 300	68, 497	82, 833	22, 116	37, 011	294, 843
Michigan.....	1, 666, 256	110, 630	312, 803	20, 475	259, 911	962, 437
Missouri.....	1, 009, 699	45, 618	267, 398	6, 208	278, 668	411, 817
Wisconsin.....	885, 979	72, 004	158, 310	36, 536	284, 919	334, 210
Region 5.....	2, 925, 820	415, 150	857, 705	41, 835	790, 304	820, 828
Arkansas.....	258, 255	57, 068	128, 077	-----	58, 079	15, 001
Louisiana.....	639, 904	71, 329	132, 051	13, 032	115, 830	307, 662
New Mexico.....	-----	-----	-----	-----	-----	-----
Oklahoma.....	536, 116	82, 809	135, 737	1, 964	111, 154	204, 452
Texas.....	1, 491, 545	203, 914	461, 840	26, 839	505, 241	293, 711
Region 6.....	1, 800, 497	148, 983	337, 073	62, 708	316, 558	935, 175
Colorado.....	280, 032	18, 187	76, 707	5, 305	69, 800	110, 033
Iowa.....	152, 232	2, 961	35, 063	11, 000	53, 359	49, 859
Kansas.....	352, 101	1, 493	41, 026	-----	42, 569	267, 013
Minnesota.....	674, 292	90, 801	79, 068	46, 403	73, 903	384, 117
Nebraska.....	204, 342	21, 504	38, 556	-----	54, 628	89, 654
North Dakota.....	26, 756	4, 722	692	-----	-----	21, 342
South Dakota.....	61, 981	8, 780	46, 476	-----	5, 945	780
Wyoming.....	48, 761	545	19, 485	-----	16, 354	12, 377
Region 7.....	10, 541, 429	365, 136	1, 451, 400	96, 043	1, 647, 596	6, 981, 254
Arizona.....	157, 599	3, 290	52, 953	-----	50, 734	50, 622
California.....	8, 100, 350	222, 289	908, 973	52, 948	1, 172, 890	5, 743, 250
Idaho.....	45, 939	1, 253	31, 102	-----	13, 584	-----
Montana.....	79, 328	1, 216	40, 481	2, 575	17, 711	17, 345
Nevada.....	31, 380	-----	13, 720	-----	-----	17, 660
Oregon.....	936, 850	68, 355	233, 967	10, 813	267, 679	356, 036
Utah.....	127, 351	995	14, 552	12, 764	44, 314	54, 726
Washington.....	1, 062, 632	67, 738	155, 652	16, 943	80, 684	741, 615
Territories and possessions.....	1, 335, 586	38, 664	181, 601	10, 152	97, 247	1, 007, 922
Alaska.....	413, 838	3, 773	5, 246	6, 515	11, 037	387, 267
American Samoa.....	-----	-----	-----	-----	-----	-----
Canal Zone.....	11, 948	-----	1, 560	1, 560	1, 637	7, 191
Guam.....	19, 411	-----	665	-----	-----	18, 746
Hawaii.....	401, 997	2, 220	62, 935	-----	35, 687	301, 155
Puerto Rico.....	485, 100	31, 442	110, 166	2, 077	48, 433	292, 982
Virgin Islands.....	3, 292	1, 229	1, 029	-----	453	581

<sup>1</sup> Applications approved by regional administrators prior to entry on official FCDA records at National Headquarters.

<sup>2</sup> Adjusted for firm contracts, cancellations, and amendments.



## ATTACK WARNING

Region and State	Dollar value of Federal funds obligated (by fiscal year appropriation)					
	Total	1956/57	1955/56	1955	1954	1953 and 1952
Total.....	7,601,837	651,982	523,042	1,132,059	1,876,052	3,418,702
Region 1.....	1,885,041	198,257	186,705	249,101	421,643	829,335
Connecticut.....	157,893	24,733	5,460	26,050	40,950	60,700
Maine.....	36,676	3,084	9,494	7,674	16,424	16,424
Massachusetts.....	336,561	16,603	12,452	35,575	69,804	202,127
New Hampshire.....	16,511	1,791	3,187	9,335	2,198	2,198
New Jersey.....	176,102	7,812	51,739	17,035	55,190	44,326
New York.....	1,065,750	136,690	98,524	152,465	180,084	497,987
Rhode Island.....	91,037	5,474	4,375	-----	56,993	24,195
Vermont.....	4,511	2,070	1,474	967	-----	-----
Region 2.....	2,027,214	243,332	138,392	467,352	164,725	1,013,413
Delaware.....	66,198	2,447	1,743	26,927	8,466	26,615
District of Columbia.....	78,925	115	-----	7,000	-----	71,811
Kentucky.....	28,350	-----	28,350	-----	-----	-----
Maryland.....	232,060	21,943	4,938	25,095	16,574	163,510
Ohio.....	561,234	54,460	5,211	42,546	22,781	436,236
Pennsylvania.....	884,955	128,327	91,725	332,237	102,153	230,513
Virginia.....	132,457	3,701	5,268	33,547	12,181	77,760
West Virginia.....	43,034	32,339	1,157	-----	2,570	6,968
Region 3.....	470,591	7,053	34,731	76,253	131,449	221,105
Alabama.....	64,793	737	8,073	10,478	13,786	31,719
Florida.....	102,650	-----	12,272	4,529	40,423	45,426
Georgia.....	104,000	1,597	-----	18,020	33,687	50,696
Mississippi.....	15,725	-----	5,327	180	-----	10,218
North Carolina.....	61,078	3,861	8,638	11,282	24,212	13,085
South Carolina.....	10,804	-----	396	20	10,388	-----
Tennessee.....	111,541	858	25	31,744	8,953	69,961
Region 4.....	989,134	41,160	68,661	128,615	302,619	448,079
Illinois.....	364,711	18,875	6,183	43,280	128,566	167,807
Indiana.....	97,193	1,052	16,871	22,116	25,001	32,153
Michigan.....	170,388	5,342	20,508	20,475	21,733	102,330
Missouri.....	229,184	2,699	20,088	6,208	98,058	102,131
Wisconsin.....	127,658	13,192	5,011	36,536	29,261	43,658
Region 5.....	382,832	35,386	35,463	41,835	195,269	74,879
Arkansas.....	298	-----	298	-----	-----	-----
Louisiana.....	57,556	-----	6,957	13,032	17,027	20,540
New Mexico.....	-----	-----	-----	-----	-----	-----
Oklahoma.....	52,223	11,636	1,250	1,964	36,027	1,346
Texas.....	272,755	23,750	26,958	26,839	142,215	52,993
Region 6.....	356,120	27,063	8,227	62,708	101,129	156,993
Colorado.....	36,387	-----	279	5,305	2,163	28,640
Iowa.....	48,837	1,500	-----	11,000	31,540	4,797
Kansas.....	45,921	290	2,217	-----	9,138	34,276
Minnesota.....	183,907	19,953	3,824	46,403	49,451	64,276
Nebraska.....	23,366	-----	1,907	-----	4,540	16,919
North Dakota.....	1,925	1,925	-----	-----	-----	-----
South Dakota.....	3,395	3,395	-----	-----	-----	-----
Wyoming.....	12,382	-----	-----	-----	4,297	8,085
Region 7.....	1,335,441	98,253	45,627	96,043	523,854	571,664
Arizona.....	35,029	-----	-----	-----	16,956	18,073
California.....	1,057,673	97,191	35,782	52,948	461,481	410,271
Idaho.....	-----	-----	-----	-----	-----	-----
Montana.....	14,252	-----	-----	2,575	11,677	-----
Nevada.....	-----	-----	-----	-----	-----	-----
Oregon.....	57,207	1,062	2,338	10,813	4,056	38,938
Utah.....	21,009	-----	-----	12,764	6,590	1,655
Washington.....	150,271	-----	7,507	16,943	23,094	102,727
Territories and possessions.....	155,464	1,478	5,236	10,152	35,364	103,234
Alaska.....	103,384	1,478	-----	6,515	993	94,398
American Samoa.....	-----	-----	-----	-----	-----	-----
Canal Zone.....	4,680	-----	1,560	1,560	1,560	-----
Guam.....	4,728	-----	-----	-----	-----	4,728
Hawaii.....	22,237	-----	-----	-----	22,237	-----
Puerto Rico.....	20,435	-----	3,676	2,077	10,574	4,108
Virgin Islands.....	-----	-----	-----	-----	-----	-----



## ATTACK WARNING

Region and State	Recurring charges approved (dollars)				Selected items approved for procurement	
	Total	Fiscal year 1956	Fiscal year 1955	Fiscal year 1954	Sirens (units)	Bell and light installations (units)
Total.....	629,211	216,885	236,807	175,519	9,050	2,064
Region 1.....	185,905	22,757	86,480	76,608	2,833	268
Connecticut.....	31,935	12,644	9,245	10,046	290	36
Maine.....					32	
Massachusetts.....	8,899	5,861	275	2,763	383	110
New Hampshire.....	230		230		20	24
New Jersey.....	2,513	2,513			288	2
New York.....	142,328	1,739	76,730	63,859	1,702	92
Rhode Island.....					104	4
Vermont.....					14	
Region 2.....	220,366	93,179	89,560	37,627	2,268	750
Delaware.....					64	
District of Columbia.....	175	115		60		
Kentucky.....					18	
Maryland.....	74,554	62,023	5,706	6,825	315	210
Ohio.....	39,554	11,093	12,539	15,922	414	102
Pennsylvania.....	92,219	14,473	66,260	11,486	1,201	341
Virginia.....	12,707	4,318	5,055	3,334	143	7
West Virginia.....	1,157	1,157			23	
Region 3.....	19,985	9,584	7,591	2,813	393	174
Alabama.....	5,964	2,433	3,267	264	52	65
Florida.....	1,839	1,101	50	688	49	24
Georgia.....	5,570	3,379	1,089	1,102	144	58
Mississippi.....	180		180		10	
North Carolina.....	684	396	288		74	13
South Carolina.....	576	396	180		10	
Tennessee.....	5,175	1,879	2,537	759	54	13
Region 4.....	69,254	26,147	19,702	23,405	1,068	279
Illinois.....	12,773	4,388	3,861	4,524	200	119
Indiana.....	4,477	2,280	1,488	709	138	36
Michigan.....	7,157	2,908	1,731	2,518	95	56
Missouri.....	22,240	9,342	6,163	6,735	254	4
Wisconsin.....	22,607	7,229	6,459	8,919	291	64
Region 5.....	11,653	5,825	5,204	624	386	115
Arkansas.....					1	
Louisiana.....	8,025	4,417	3,608		105	37
New Mexico.....						
Oklahoma.....					64	
Texas.....	3,628	1,408	1,596	624	216	78
Region 6.....	5,639	2,051	1,193	2,395	297	190
Colorado.....	2,539		743	1,796	33	
Iowa.....	283			283	71	55
Kansas.....					45	1
Minnesota.....	2,244	1,643	450	151	136	134
Nebraska.....	548	383		165	4	
North Dakota.....	25	25			1	
South Dakota.....					4	
Wyoming.....					3	
Region 7.....	110,248	54,304	25,517	30,427	1,681	288
Arizona.....					7	
California.....	102,749	51,931	22,863	27,955	1,468	248
Idaho.....						
Montana.....					19	
Nevada.....						
Oregon.....	1,378	643	568	167	18	2
Utah.....					16	
Washington.....	6,121	1,730	2,086	2,305	153	38



## ATTACK WARNING—Continued

Region and State	Recurring charges approved (dollars)				Selected items approved for procurement	
	Total	Fiscal year 1956	Fiscal year 1955	Fiscal year 1954	Sirens (units)	Bell and light installations (units)
Territories and possessions.....	6,158	3,038	1,560	1,560	124	-----
Alaska.....	1,478	1,478	-----	-----	42	-----
American Samoa.....	-----	-----	-----	-----	-----	-----
Canal Zone.....	4,680	1,560	1,560	1,560	-----	-----
Guam.....	-----	-----	-----	-----	22	-----
Hawaii.....	-----	-----	-----	-----	18	-----
Puerto Rico.....	-----	-----	-----	-----	42	-----
Virgin Islands.....	-----	-----	-----	-----	-----	-----

## COMMUNICATIONS

Region and State	Dollar value of Federal funds obligated (by fiscal year appropriation)				
	Total	1956/57	1955/56	1954	1953 and 1952
Total.....	18,526,280	2,823,092	7,486,282	4,091,125	4,125,781
Region 1.....	4,766,473	1,035,714	1,401,365	817,225	1,452,160
Connecticut.....	427,320	143,126	124,690	91,722	67,782
Maine.....	116,646	26,940	58,742	23,460	7,504
Massachusetts.....	595,834	197,711	167,779	84,365	145,979
New Hampshire.....	77,176	20,900	27,270	12,685	10,231
New Jersey.....	396,763	96,584	115,398	56,966	127,815
New York.....	2,996,354	506,761	920,186	518,159	1,051,248
Rhode Island.....	104,446	13,810	27,246	25,130	38,260
Vermont.....	51,934	23,792	20,054	4,738	3,350
Region 2.....	4,604,661	622,198	2,432,404	808,111	741,948
Delaware.....	272,752	73,024	110,150	4,263	85,315
District of Columbia.....	16,283	1,413	13,455	1,230	185
Kentucky.....	152,111	-----	117,439	10,607	24,065
Maryland.....	281,491	45,944	59,529	53,152	122,866
Ohio.....	1,416,828	76,723	1,084,038	99,310	156,757
Pennsylvania.....	2,226,980	420,192	956,188	575,025	275,575
Virginia.....	218,789	3,477	87,790	58,281	69,241
West Virginia.....	19,427	1,425	3,815	6,243	7,944
Region 3.....	1,700,132	273,131	770,265	402,912	253,824
Alabama.....	243,520	36,187	95,979	46,517	64,837
Florida.....	310,595	41,573	212,562	40,300	16,160
Georgia.....	481,964	83,553	195,017	152,971	50,423
Mississippi.....	135,829	12,115	44,535	61,642	17,537
North Carolina.....	151,620	71,689	68,260	7,401	4,270
South Carolina.....	69,353	-----	17,555	51,498	-----
Tennessee.....	307,251	28,014	136,057	42,583	100,597
Region 4.....	1,970,822	250,956	652,083	614,529	453,254
Illinois.....	501,249	45,408	100,701	199,754	155,386
Indiana.....	107,162	63,835	26,803	8,474	8,050
Michigan.....	676,800	98,750	229,330	184,910	163,810
Missouri.....	458,298	34,232	232,634	142,805	48,627
Wisconsin.....	227,313	8,731	62,615	78,586	77,381
Region 5.....	1,753,567	309,066	697,379	501,802	245,320
Arkansas.....	222,993	52,672	115,651	52,131	2,539
Louisiana.....	287,428	54,766	94,701	79,142	58,819
New Mexico.....	-----	-----	-----	-----	-----
Oklahoma.....	294,551	29,264	78,690	49,037	137,560
Texas.....	948,595	172,364	408,337	321,492	46,402



## COMMUNICATIONS—Continued

Region and State	Dollar value of Federal funds obligated (by fiscal year appropriation)				
	Total	1950/57	1955/56	1954	1953 and 1952
Region 6 .....	608,472	95,781	255,570	172,717	84,404
Colorado.....	153,931	17,382	63,218	64,110	9,221
Iowa.....	60,088	1,451	35,063	20,488	3,086
Kansas.....	67,050	593	23,606	20,974	21,878
Minnesota.....	116,115	57,274	40,018	2,534	16,289
Nebraska.....	124,916	10,722	34,182	46,837	33,175
North Dakota.....	2,979	2,542	437	-----	-----
South Dakota.....	57,058	5,385	45,728	5,945	-----
Wyoming.....	26,335	432	13,319	11,829	755
Region 7.....	2,783,985	200,988	1,096,460	733,778	752,769
Arizona.....	78,781	1,942	40,954	30,739	5,146
California.....	1,838,096	74,455	736,452	431,221	595,968
Idaho.....	45,399	1,153	30,948	13,298	-----
Montana.....	52,017	1,115	40,373	5,822	4,707
Nevada.....	12,831	-----	12,831	-----	-----
Oregon.....	471,194	64,203	172,802	186,812	47,287
Utah.....	61,876	-----	10,462	34,286	17,128
Washington.....	223,791	68,120	51,538	31,600	82,533
Territories and possessions.....	338,168	35,258	120,766	40,651	142,093
Alaska.....	72,858	2,295	-----	-----	70,563
American Samoa.....	-----	-----	-----	-----	-----
Canal Zone.....	-----	-----	-----	-----	-----
Guam.....	4,174	-----	-----	-----	4,174
Hawaii.....	39,266	900	25,156	2,067	10,143
Puerto Rico.....	221,640	31,900	94,996	37,531	57,213
Virgin Islands.....	1,830	763	614	453	-----

## COMMUNICATIONS

Region and State	Recurring charges approved (dollars)				Selected items approved for procurement (units)		
	Total	Fiscal year 1956	Fiscal year 1955	Fiscal year 1954	Transmitter-receivers		
					Base station	Mobile	Portable
Total.....	521,432	246,640	61,440	213,352	6,514	28,801	8,428
Region 1.....	243,194	131,506	6,471	105,217	1,306	6,640	2,181
Connecticut.....	15,809	10,203	5,384	222	130	693	219
Maine.....	2,025	2,025	-----	-----	54	223	158
Massachusetts.....	15,951	7,464	1,087	7,400	291	1,040	335
New Hampshire.....	-----	-----	-----	-----	32	149	67
New Jersey.....	4,428	2,587	-----	1,841	187	565	213
New York.....	201,179	107,023	-----	94,156	557	3,688	1,127
Rhode Island.....	3,181	1,583	-----	1,598	44	223	44
Vermont.....	621	621	-----	-----	11	59	18
Region 2.....	94,328	37,978	14,963	41,387	1,348	7,667	2,578
Delaware.....	2,132	1,255	524	353	48	358	54
District of Columbia.....	4,037	1,413	1,455	1,169	-----	-----	-----
Kentucky.....	-----	-----	-----	-----	62	380	21
Maryland.....	9,208	3,663	2,553	2,992	91	287	311
Ohio.....	21,281	15,453	3,712	2,116	234	2,526	151
Pennsylvania.....	55,686	15,383	6,719	33,584	828	3,830	1,893
Virginia.....	1,984	811	-----	1,173	67	269	148
West Virginia.....	-----	-----	-----	-----	18	17	-----



## COMMUNICATIONS—Continued

Region and State	Recurring charges approved (dollars)				Selected items approved for procurement (units)		
	Total	Fiscal year 1956	Fiscal year 1955	Fiscal year 1954	Transmitter-receivers		
					Base station	Mobile	Portable
Region 3.....	8,022	2,448	3,403	2,171	849	3,370	268
Alabama.....					131	479	55
Florida.....	2,513	121	972	1,420	188	471	60
Georgia.....	1,694	1,255	326	113	163	1,081	80
Mississippi.....	836		836		60	370	2
North Carolina.....	1,041		831	210	18	130	16
South Carolina.....					101	211	4
Tennessee.....	1,938	1,072	438	428	188	628	51
Region 4.....	36,948	23,470	4,655	8,823	643	2,778	873
Illinois.....	20,678	13,781	4,282	2,615	168	751	378
Indiana.....					66	268	49
Michigan.....	10,393	7,517		2,876	187	843	226
Missouri.....	4,102	1,855		2,247	193	722	168
Wisconsin.....	1,775	317	373	1,085	29	194	52
Region 5.....	4,849	1,013	638	3,108	685	4,005	471
Arkansas.....					78	497	40
Louisiana.....	2,335			2,335	112	638	75
New Mexico.....			240		145	630	51
Oklahoma.....	670	430			350	2,240	305
Texas.....	1,844	583	398	863			
Region 6.....	4,409	2,143	1,476	790	284	1,237	170
Colorado.....	905	905			33	461	57
Iowa.....					20	165	27
Kansas.....	3,497	1,238	1,476	783	68	105	6
Minnesota.....					59	115	12
Nebraska.....					65	243	41
North Dakota.....						11	1
South Dakota.....					37	136	8
Wyoming.....	7			7	2	1	18
Region 7.....	129,631	48,082	29,834	51,715	1,136	2,776	1,770
Arizona.....					12	41	40
California.....	126,020	46,324	29,834	49,862	864	1,814	1,366
Idaho.....					22	95	27
Montana.....					24	95	24
Nevada.....					7		
Oregon.....					67	413	118
Utah.....					20	129	38
Washington.....	3,611	1,758		1,853	120	189	157
Territories and possessions.....	51			51	263	328	117
Alaska.....					6	40	82
American Samoa.....							
Canal Zone.....					7		
Guam.....							
Hawaii.....	51			51	24	9	16
Puerto Rico.....					225	278	18
Virgin Islands.....					1	1	1



## ENGINEERING

Region and State	Dollar value of Federal funds obligated (by fiscal year appropriations)			Selected items approved for procurement				
	Total <sup>2</sup>	1956/57	1955/56	8-inch steel pipe and fittings <sup>1</sup>	Portable generators	Portable pumps	Water chlorinators	Water purification units
Total.....	431,822	165,948	265,874	300	149	40	9	1
Region 1.....	95,231	45,145	50,086		53	6		1
Connecticut.....	7,692	3,590	4,102		3			
Maine.....	6,237	1,229	5,008		11			
Massachusetts.....	27,589	21,435	6,154		22	3		
New Hampshire.....								1
New Jersey.....	12,291	3,223	9,068		2			
New York.....	37,931	15,668	22,263		8			
Rhode Island.....	2,677		2,677		7	3		
Vermont.....	814		814					
Region 2.....	150,455	56,829	93,626	300	54	32	3	
Delaware.....								
District of Columbia.....	2,136	1,533	603		1			
Kentucky.....								
Maryland.....	19,675	7,175	12,500		5			
Ohio.....	25,358	21,258	4,100		11	26	2	
Pennsylvania.....	14,368	12,388	1,980		2	1		
Virginia.....	87,534	13,425	74,109	300	33	5	1	
West Virginia.....	1,384	1,050	334		2			
Region 3.....	27,593	18,705	8,888		7			
Alabama.....	808	808						
Florida.....	14,750	14,750			5			
Georgia.....	9,354	2,157	7,197		1			
Mississippi.....								
North Carolina.....	1,691		1,691		1			
South Carolina.....								
Tennessee.....	990	990						
Region 4.....	59,920	32,874	27,046		15	1		
Illinois.....	7,199	2,668	4,531		3			
Indiana.....	11,244	911	10,333		5			
Michigan.....	5,850		5,850		4	1		
Missouri.....	3,627	3,627						
Wisconsin.....	32,000	25,668	6,332		3			
Region 5.....	1,561		1,561		1			
Arkansas.....								
Louisiana.....								
New Mexico.....								
Oklahoma.....								
Texas.....	1,561		1,561		1			
Region 6.....	14,416	5,090	9,326		3	1		
Colorado.....	136		136					
Iowa.....								
Kansas.....	397		397			1		
Minnesota.....	13,853	5,090	8,793		3			
Nebraska.....								
North Dakota.....								
South Dakota.....								
Wyoming.....								
Region 7.....	83,646	7,305	75,341		16		6	
Arizona.....	1,216	1,216						
California.....	32,104	354	31,750		5		1	
Idaho.....	154		154		1		1	
Montana.....								
Nevada.....								
Oregon.....	1,650		1,650					
Utah.....							4	
Washington.....	47,522	5,735	41,787		10			

See footnotes at end of table.



## ENGINEERING—Continued

Region and State	Dollar value of Federal funds obligated (by fiscal year appropriation)			Selected items approved for procurement				
	Total <sup>2</sup>	1956/57	1955/56	8-inch steel pipe and fittings <sup>1</sup>	Portable generators	Portable pumps	Water chlorinators	Water purification units
Territories and possessions.....	-----	-----	-----	-----	-----	-----	-----	-----
Alaska.....	-----	-----	-----	-----	-----	-----	-----	-----
American Samoa.....	-----	-----	-----	-----	-----	-----	-----	-----
Canal Zone.....	-----	-----	-----	-----	-----	-----	-----	-----
Guam.....	-----	-----	-----	-----	-----	-----	-----	-----
Hawaii.....	-----	-----	-----	-----	-----	-----	-----	-----
Puerto Rico.....	-----	-----	-----	-----	-----	-----	-----	-----
Virgin Islands.....	-----	-----	-----	-----	-----	-----	-----	-----

<sup>1</sup> Number of feet.<sup>2</sup> Not programed for fiscal year 1952. Funds obligated for engineering in fiscal year 1953 and 1954 are under other services.FIRE SERVICE <sup>1</sup>

Region and State	Dollar value of Federal funds obligated (by fiscal year appropriation)			Selected items approved for procurement (units)				
	Total	1953	1952	Pump-ers	Port-able gener-ators	Port-able pumps	1½ inch hose (feet)	2½ inch hose (feet)
Total.....	9,098,272	6,494,909	2,603,363	1,353	324	468	685,019	2,139,243
Region 1.....	2,554,623	1,685,619	869,004	378	23	32	124,500	578,250
Connecticut.....	167,136	134,774	32,362	15	3	1	5,500	23,800
Maine.....	-----	-----	-----	5	-----	-----	-----	-----
Massachusetts.....	249,898	124,619	125,279	32	4	5	26,600	52,600
New Hampshire.....	-----	-----	-----	-----	-----	-----	200	-----
New Jersey.....	505,795	317,068	188,727	77	-----	3	23,700	67,450
New York.....	1,527,080	1,045,737	481,343	233	16	15	57,700	412,900
Rhode Island.....	81,443	40,150	41,293	13	-----	-----	2,500	8,150
Vermont.....	23,271	23,271	-----	3	-----	8	8,500	13,150
Region 2.....	2,431,246	1,788,784	642,462	361	121	223	224,720	573,700
Delaware.....	221,136	221,136	-----	32	18	13	19,300	31,000
District of Columbia.....	-----	-----	-----	-----	-----	-----	-----	-----
Kentucky.....	66,223	41,049	25,179	10	1	-----	7,700	21,500
Maryland.....	27,382	27,382	-----	3	17	100	16,500	48,200
Ohio.....	502,444	290,653	211,791	72	10	6	31,900	85,400
Pennsylvania.....	1,489,036	1,111,523	377,513	228	69	99	126,720	333,350
Virginia.....	125,020	97,041	27,979	15	6	5	22,600	54,250
West Virginia.....	-----	-----	-----	1	-----	-----	-----	-----
Region 3.....	489,812	417,291	72,521	71	5	1	42,100	152,750
Alabama.....	113,079	97,145	15,934	20	-----	-----	3,300	27,700
Florida.....	1,322	1,322	-----	-----	-----	-----	2,200	3,000
Georgia.....	151,870	151,870	-----	19	3	-----	19,100	62,200
Mississippi.....	-----	-----	-----	-----	-----	-----	-----	-----
North Carolina.....	12,462	12,462	-----	-----	-----	1	5,700	10,600
South Carolina.....	-----	-----	-----	-----	-----	-----	1,000	3,000
Tennessee.....	211,079	154,492	56,587	32	2	-----	10,800	46,250
Region 4.....	1,353,919	929,159	424,760	206	23	52	52,150	225,850
Illinois.....	739,875	565,183	174,692	120	11	10	21,700	91,050
Indiana.....	131,078	125,442	5,636	28	2	5	6,100	14,900
Michigan.....	268,568	108,762	159,806	30	4	34	14,450	40,100
Missouri.....	205,141	129,772	76,369	26	6	2	9,400	77,800
Wisconsin.....	8,257	-----	8,257	2	-----	1	500	2,000

See footnote at end of table



FIRE SERVICE <sup>1</sup>—Continued

Region and State	Dollar value of Federal funds obligated (by fiscal year appropriation)			Selected items approved for procurement (units)				
	Total	1953	1952	Pump- ers	Port- able gener- ators	Port- able pumps	1½ inch hose (feet)	2½ inch hose (feet)
Region 5.....	343,367	287,390	55,977	46	12	23	44,094	128,988
Arkansas.....	11,698	11,698	—	1	1	—	3,000	10,000
Louisiana.....	181,244	125,267	55,977	24	4	12	15,300	43,800
New Mexico.....	—	—	—	—	—	—	—	—
Oklahoma.....	49,849	49,849	—	4	4	6	14,499	42,388
Texas.....	100,576	100,576	—	17	3	5	11,250	32,800
Region 6.....	196,802	130,658	66,144	20	4	97	38,250	85,455
Colorado.....	23,398	6,633	16,765	4	—	—	2,900	6,900
Iowa.....	17,806	17,806	—	4	—	—	3,500	7,000
Kansas.....	66,330	59,871	6,459	8	4	52	27,300	39,805
Minnesota.....	89,268	46,348	42,920	2	—	43	—	20,000
Nebraska.....	—	—	—	1	—	2	4,150	9,550
North Dakota.....	—	—	—	1	—	—	400	2,200
South Dakota.....	—	—	—	—	—	—	—	—
Wyoming.....	—	—	—	—	—	—	—	—
Region 7.....	1,477,459	1,107,873	369,586	219	136	40	145,450	354,450
Arizona.....	3,571	3,571	—	—	—	—	1,400	4,150
California.....	1,234,607	922,676	311,931	189	128	17	107,600	272,600
Idaho.....	—	—	—	—	—	—	—	—
Montana.....	11,567	11,567	—	—	—	10	3,000	2,800
Nevada.....	—	—	—	—	—	—	—	4,000
Oregon.....	87,705	65,626	22,079	1	6	4	21,500	25,900
Utah.....	4,832	4,832	—	—	2	6	1,700	4,600
Washington.....	135,177	99,601	35,576	19	—	3	10,250	40,400
Territories and possessions.....	251,044	148,135	102,909	52	—	—	13,800	39,800
Alaska.....	141,278	38,369	102,909	30	—	—	1,400	4,800
American Samoa.....	—	—	—	—	—	—	—	—
Canal Zone.....	—	—	—	—	—	—	—	—
Guam.....	—	—	—	—	—	—	—	—
Hawaii.....	10,579	10,579	—	1	—	—	400	2,000
Puerto Rico.....	99,187	99,187	—	21	—	—	12,000	33,000
Virgin Islands.....	—	—	—	—	—	—	—	—

<sup>1</sup> The fire service program was in effect only in fiscal years 1952 and 1953.

## HEALTH AND SPECIAL WEAPONS DEFENSE

Region and State	Dollar value of Federal funds obligated (by fiscal year appropriation)				
	Total	1956/57	1955/56	1954	1953 and 1952
Total.....	14,901,883	533,571	1,872,493	877,333	11,618,486
Region 1.....	7,451,941	409,957	1,411,594	367,602	5,262,788
Connecticut.....	383,042	3,941	7,249	53,810	318,042
Maine.....	38,662	1,989	10,906	5,649	20,218
Massachusetts.....	809,315	2,908	19,223	4,446	782,738
New Hampshire.....	26,469	3,218	3,082	6,639	13,530
New Jersey.....	444,942	1,212	16,329	54,946	372,455
New York.....	5,732,830	396,465	1,353,949	236,931	3,745,485
Rhode Island.....	16,048	224	223	5,281	10,320
Vermont.....	633	—	663	—	—
Region 2.....	3,307,144	111,522	224,087	154,593	2,816,942
Delaware.....	126,845	61,215	7,791	8,361	49,478
District of Columbia.....	100,680	—	1,467	—	99,213
Kentucky.....	15,820	—	—	—	15,070
Maryland.....	485,831	16,088	40,760	15,981	413,002



## HEALTH AND SPECIAL WEAPONS DEFENSE—Continued

Region and State	Dollar value of Federal funds obligated (by fiscal year appropriation)				
	Total	1956/57	1955/56	1954	1953 and 1952
Region 2—Continued					
Ohio.....	790,137	28,076	72,246	87,995	601,820
Pennsylvania.....	1,680,407	3,405	85,407	20,096	1,571,499
Virginia.....	103,332	1,988	16,095	21,978	63,271
West Virginia.....	4,092		321	182	3,589
Region 3.....	176,479	1,071	44,810	19,401	111,197
Alabama.....	582		278	304	
Florida.....	17,473		14,461		3,012
Georgia.....	26,259	1,071	5,991	18,736	461
Mississippi.....	15,863		15,863		
North Carolina.....	27,429		7,616		19,813
South Carolina.....	76				76
Tennessee.....	88,797		601	361	87,835
Region 4.....	606,640	2,019	90,537	152,831	451,253
Illinois.....	37,762		12,843	8,896	16,023
Indiana.....	58,657		1,490	1,188	55,878
Michigan.....	234,494	118	24,809		209,567
Missouri.....	13,726			2,268	11,458
Wisconsin.....	352,001	1,800	51,395	140,479	158,327
Region 5.....	34,403	1,013	6,080	14,005	13,305
Arkansas.....	298		298		
Louisiana.....	9,882	1,013	4,174	4,198	497
New Mexico.....					
Oklahoma.....	13,169		552		12,616
Texas.....	11,054		1,055	9,807	192
Region 6.....	173,560	2,845	20,811	7,581	142,323
Colorado.....	18,371	655	383	1,204	16,129
Iowa.....	830			830	
Kansas.....	66,880	125	7,550	1,271	57,934
Minnesota.....	67,025	2,065	6,369	4,276	54,315
Nebraska.....	13,106				13,106
North Dakota.....	1,094		255		839
South Dakota.....	748		748		
Wyoming.....	5,506		5,506		
Region 7.....	2,659,361	3,969	33,304	144,145	2,477,943
Arizona.....	532	132	126	274	
California.....	2,195,534	1,158	8,159	101,846	2,084,371
Idaho.....					
Montana.....					
Nevada.....	889		889		
Oregon.....	150,061	205	1,153	36,481	112,222
Utah.....	8,148	533	710		6,905
Washington.....	304,197	1,941	22,267	5,544	274,445
Territories and possessions.....	402,335	1,175	41,270	17,175	342,735
Alaska.....	65,059		3,777	6,623	54,659
American Samoa.....					
Canal Zone.....	7,191				7,191
Guam.....	777		106		671
Hawaii.....	263,349	1,175	31,191	10,552	220,431
Puerto Rico.....	65,979		6,196		59,783
Virgin Islands.....					



## HEALTH AND SPECIAL WEAPONS DEFENSE

Region and State	Selected items approved for procurement							
	Casualty care		Blood			Chemical warfare defense	Radiological defense	
	First aid station systems	200-bed emergency hospitals	Recipient sets	Plasma	Expanders	Gas masks	Dosimeters	Survey meters
Total.....	6,712	107	2,612,810	313,510	241,648	19,627	7,628	9,572
Region 1.....	2,273	37	1,596,667	207,792	160,755	10,411	1,690	848
Connecticut.....	222	10	10,045	5		7,047	299	153
Maine.....	12	1		2,700		1,000	179	97
Massachusetts.....	413	7	333,888		11,450	35	183	121
New Hampshire.....	10					920	40	22
New Jersey.....	144	1	22,734	5,036	22,765	1,404	816	177
New York.....	1,451	18	1,200,000	200,000	132,540		153	234
Rhode Island.....	21			51		100		34
Vermont.....						5	20	10
Region 2.....	2,351	34	383,793	70,059	39,588	6,687	2,501	5,981
Delaware.....	53		5,179	125	7,500	134	322	268
District of Columbia.....	40		8,000	1,400				62
Kentucky.....			6,836	306				5
Maryland.....	171	20	15,125	250	14,826	50	87	90
Ohio.....	337	14	47,243	26,558	15,822	5,750	253	4,093
Pennsylvania.....	1,655	14	301,410	50,235	250	511	1,623	1,373
Virginia.....	75			185	1,200	242	216	80
West Virginia.....	20							10
Region 3.....	286	1	10,264		400	1,090	23	115
Alabama.....							7	11
Florida.....	4		72			50	8	23
Georgia.....	1					40	8	61
Mississippi.....		1	192					
North Carolina.....	60		9,000					
South Carolina.....					400			
Tennessee.....	221		1,000			1,000		20
Region 4.....	519	6	105,186	14,647	2,468	16	980	205
Illinois.....	6		100	676		10	127	105
Indiana.....	181		11,000				11	25
Michigan.....	217		94,063	13,825		6	59	19
Missouri.....	5		10	144	200			
Wisconsin.....	110	6	13	2	2,268		783	56
Region 5.....	35				15	2	138	126
Arkansas.....							2	10
Louisiana.....							132	70
New Mexico.....								
Oklahoma.....	35				15			
Texas.....						2	4	46
Region 6.....	157	3	4,000	84	4,500	950	364	458
Colorado.....	26		500					6
Iowa.....								
Kansas.....	82	3	3,090		300	300	15	27
Minnesota.....	39		500	84	4,200	600	138	247
Nebraska.....	8							
North Dakota.....	2						8	8
South Dakota.....							25	20
Wyoming.....						50	178	160
Region 7.....	923	26	497,864	4,578	1,592	321	1,812	1,625
Arizona.....						36		
California.....	683	20	378,000			150	384	990
Idaho.....								
Montana.....								
Nevada.....								15
Oregon.....	48		38,060	4,544	1,592		6	60
Utah.....			7,700	34				6
Washington.....	192	6	74,114			135	1,422	554



## HEALTH AND SPECIAL WEAPONS DEFENSE—Continued

Region and State	Selected items approved for procurement							
	Casualty care		Blood			Chemical warfare defense	Radiological defense	
	First aid systems	200-bed emergency hospitals	Recipient sets	Plasma	Expanders	Gas masks	Dosimeters	Survey meters
Territories and possessions	168	-----	45, 036	7, 350	26, 330	150	120	214
Alaska	30	-----	12, 000	2, 000	2, 400	-----	20	48
American Samoa	-----	-----	-----	-----	-----	-----	-----	-----
Canal Zone	4	-----	-----	-----	-----	-----	-----	-----
Guam	1	-----	-----	-----	-----	-----	-----	-----
Hawaii	100	-----	6, 036	850	23, 930	150	100	106
Puerto Rico	33	-----	27, 000	4, 500	-----	-----	-----	60
Virgin Islands	-----	-----	-----	-----	-----	-----	-----	-----

## POLICE SERVICES

Region and State	Dollar value of Federal funds obligated (by fiscal year appropriation)			Selected items approved for procurement (units)			
	Total	1956/57	1955/56	Badges	Holsters	Revolvers	Raincoats
Total	109, 378	75, 225	34, 153	3, 688	667	569	3, 051
Region 1	22, 327	22, 327	-----	864	54	58	795
Connecticut	5, 325	5, 325	-----	64	25	25	170
Maine	3, 272	3, 272	-----	600	9	9	400
Massachusetts	4, 079	4, 079	-----	200	15	19	175
New Hampshire	-----	-----	-----	-----	-----	-----	-----
New Jersey	1, 865	1, 865	-----	-----	5	5	50
New York	7, 654	7, 654	-----	-----	-----	-----	-----
Rhode Island	-----	-----	-----	-----	-----	-----	-----
Vermont	132	132	-----	-----	-----	-----	-----
Region 2	56, 605	23, 604	33, 001	1, 745	461	400	2, 143
Delaware	9, 588	-----	9, 588	-----	-----	-----	1, 000
District of Columbia	-----	-----	-----	-----	-----	-----	-----
Kentucky	-----	-----	-----	-----	-----	-----	-----
Maryland	815	815	-----	-----	-----	-----	-----
Ohio	5, 562	5, 562	-----	63	-----	4	90
Pennsylvania	38, 177	14, 764	23, 413	1, 682	461	396	953
Virginia	2, 463	2, 463	-----	-----	-----	-----	100
West Virginia	-----	-----	-----	-----	-----	-----	-----
Region 3	2, 676	2, 107	569	495	50	50	-----
Alabama	1, 227	1, 227	-----	-----	50	50	-----
Florida	662	662	-----	195	-----	-----	-----
Georgia	-----	-----	-----	-----	-----	-----	-----
Mississippi	-----	-----	-----	-----	-----	-----	-----
North Carolina	-----	-----	-----	-----	-----	-----	-----
South Carolina	-----	-----	-----	-----	-----	-----	-----
Tennessee	787	218	569	300	-----	-----	-----
Region 4	22, 687	22, 349	338	272	10	10	83
Illinois	279	135	144	76	-----	-----	20
Indiana	755	561	194	38	-----	-----	38
Michigan	165	165	-----	50	-----	-----	-----
Missouri	1, 348	1, 348	-----	108	10	10	25
Wisconsin	20, 140	20, 140	-----	-----	-----	-----	-----



## POLICE SERVICES—Continued

Region and State	Dollar value of Federal funds obligated (by fiscal year appropriation)			Selected items approved for procurement (units)			
	Total	1950/57	1955/56	Badges	Holsters	Revolvers	Raincoats
Region 5.....							
Arkansas.....							
Louisiana.....							
New Mexico.....							
Oklahoma.....							
Texas.....							
Region 6.....	871	871		50		14	
Colorado.....							
Iowa.....							
Kansas.....							
Minnesota.....	871	871		50		14	
Nebraska.....							
North Dakota.....							
South Dakota.....							
Wyoming.....							
Region 7.....	4,212	3,967	245	262	92	37	30
Arizona.....							
California.....	3,109	2,864	245	262	92	37	30
Idaho.....							
Montana.....							
Nevada.....							
Oregon.....	1,103	1,103					
Utah.....							
Washington.....							
Territories and possessions.....							
Alaska.....							
American Samoa.....							
Canal Zone.....							
Guam.....							
Hawaii.....							
Puerto Rico.....							
Virgin Islands.....							

## PUBLIC CD INFORMATION AND EDUCATION

Region and State	Dollar value of Federal funds obligated (by fiscal year appropriation)				
	Total	1956/57	1955/56	1954 <sup>1</sup>	1953
Total.....	729,057	119,005	267,596		342,456
Region 1.....	272,711	64,346	78,121		130,244
Connecticut.....	7,967	1,558	3,366		
Maine.....	15,431	4,084	11,347		3,043
Massachusetts.....	38,507	20,050	4,111		5,346
New Hampshire.....					
New Jersey.....	23,411	1,245	3,830		18,336
New York.....	184,943	27,512	54,677		102,754
Rhode Island.....	382				382
Vermont.....	2,070	897	790		383
Region 2.....	237,124	30,031	91,835		115,258
Delaware.....	4,505	963	3,542		
District of Columbia.....	19,855		19,855		
Kentucky.....	1,933		1,367		566
Maryland.....	21,793	7,675	3,500		10,618
Ohio.....	101,934	2,103	25,681		74,150
Pennsylvania.....	71,031	17,096	30,786		23,149
Virginia.....	15,626	2,194	6,991		6,441
West Virginia.....	447		113		354

<sup>1</sup> Included under training and education in 1952 and 1954.



## PUBLIC CD INFORMATION AND EDUCATION—Continued

Region and State	Dollar value of Federal funds obligated (by fiscal year appropriation)				
	Total	1956/57	1955/56	1954 <sup>1</sup>	1953
Region 3.....	62,086	3,729	25,104		33,253
Alabama.....	7,263	615	4,679		1,969
Florida.....	3,724	600	2,698		426
Georgia.....	43,853	2,514	13,704		27,635
Mississippi.....	736		285		451
North Carolina.....	618		462		156
South Carolina.....	50				50
Tennessee.....	5,842		3,276		2,566
Region 4.....	58,301	3,922	38,209		16,170
Illinois.....	7,414	365	7,049		
Indiana.....	9,487	1,126	4,154		4,207
Michigan.....	19,266	2,273	11,203		5,790
Missouri.....	12,821	158	9,125		3,538
Wisconsin.....	9,313		6,678		2,635
Region 5.....	28,816	2,342	12,027		14,447
Arkansas.....	199		199		
Louisiana.....	12,308	1,877	8,236		2,195
New Mexico.....					
Oklahoma.....	181				181
Texas.....	16,128	465	3,592		12,071
Region 6.....	19,776	1,109	15,665		3,002
Colorado.....	11,732	150	10,260		1,322
Iowa.....					
Kansas.....	3,871		3,825		46
Minnesota.....	3,329	268	1,474		1,587
Nebraska.....	797	691	106		
North Dakota.....					
South Dakota.....					
Wyoming.....	47				47
Region 7.....	38,169	13,381			24,788
Arizona.....	199				199
California.....	29,911	11,585			18,326
Idaho.....					
Montana.....					
Nevada.....	43				43
Oregon.....	4,523	735			3,788
Utah.....	1,704				1,704
Washington.....	1,789	1,061			728
Territories and possessions.....	12,074	145	6,635		5,294
Alaska.....	2,198		1,337		861
American Samoa.....					
Canal Zone.....					
Guam.....					
Hawaii.....	4,578	145			4,433
Puerto Rico.....	5,298		5,298		
Virgin Islands.....					

<sup>1</sup>Included under training and education in 1952 and 1954.



## RESCUE SERVICE

Region and State	Dollar value of Federal funds obligated (by fiscal year appropriation)					Selected items approved for procurement (units)			
	Total	1956/57	1955/56	1954	1953 and 1952	Basic rescue kits	Trucks and trailers with tools	Trucks and trailers without tools	Sets of tools
Total.....	2,390,861	145,748	592,124	555,028	1,097,961	27	427	171	384
Region 1.....	759,849	61,702	181,785	169,967	346,395		91	73	142
Connecticut.....	60,240	9,707	11,557	16,673	22,303		10	5	4
Maine.....	29,011		13,750	315	14,946		11		
Massachusetts.....	151,845	31,386	28,255	20,380	71,815		9	14	20
New Hampshire.....	4,279		520	3,654	105		1		1
New Jersey.....	122,626		54,235	26,992	41,399		28	4	5
New York.....	365,373	17,880	63,875	92,334	101,284		27	50	112
Rhode Island.....	18,637		5,010	9,084	4,543		5		
Vermont.....	7,838	2,729	4,583	526					
Region 2.....	699,398	58,665	245,116	117,142	278,575	13	120	57	90
Delaware.....	37,581	115	19,887	3,826	13,753		11		
District of Columbia.....									
Kentucky.....	4,696				4,696			2	3
Maryland.....	85,017	13,872	37,634	15,537	17,974	4	21	1	20
Ohio.....	199,184		30,843	44,718	129,623		37	16	21
Pennsylvania.....	290,770	26,163	128,849	31,151	104,607	5	38	37	43
Virginia.....	78,717	18,415	27,903	18,477	13,922	4	12	1	
West Virginia.....	3,433			3,433			1		2
Region 3.....	107,900	5,313	28,282	25,019	49,286		30	3	3
Alabama.....							1	1	
Florida.....	9,366		9,366						
Georgia.....	41,992			7,650	34,342		10	1	1
Mississippi.....	18,971		9,000	8,839	1,132		5		
North Carolina.....	21,088	5,313	6,812	4,132	4,831		4		1
South Carolina.....								1	
Tennessee.....	16,483		3,104	4,398	8,981		10		1
Region 4.....	196,731	6,156	43,449	119,185	27,941	3	34	8	15
Illinois.....	70,405	5,760	2,628	50,222	11,805		8		
Indiana.....	16,466	193	14,850	1,423			5		
Michigan.....	56,944	213	6,771	44,130	5,830	2	15	8	9
Missouri.....	19,954		1,993	7,655	10,306		1		6
Wisconsin.....	32,962		17,207	15,755		1	5		
Region 5.....	113,627	7,032	29,140	29,351	48,104	2	24	2	3
Arkansas.....	10,512	2,006	2,558	5,948		2	2		
Louisiana.....	27,305	5,026	8,925	12,608	746		8	1	
New Mexico.....									
Oklahoma.....	7,583		6,892	691			1		
Texas.....	68,227		10,765	10,104	47,358		13	1	3
Region 6.....	130,601	4,076	14,932	10,066	101,527		27	9	37
Colorado.....							1		
Iowa.....	9,617				9,617		5		
Kansas.....	686		686				1		
Minnesota.....	120,298	4,076	14,246	10,066	91,910		20	9	37
Nebraska.....									
North Dakota.....									
South Dakota.....									
Wyoming.....									
Region 7.....	373,833	2,904	44,470	84,298	242,161	9	93	19	94
Arizona.....	8,439		7,132	339	968	4			
California.....	261,594	2,557	3,750	66,162	189,125	5	62	17	88
Idaho.....									
Montana.....									
Nevada.....									
Oregon.....	63,457	347	32,690	16,973	13,447		12	1	1
Utah.....	898		898				1		
Washington.....	39,445			824	38,621		18	1	5

\*Purchased under training and education program.



## RESCUE SERVICE—Continued

Region and State	Dollar value of Federal funds obligated (by fiscal year appropriation)					Selected items approved for procurement (units)			
	Total	1956/57	1955/56	1954	1953 and 1952	Basic rescue kits	Trucks and trailers with tools	Trucks and trailers without tools	Set of tools
Territories and possessions	8,922	-----	4,950	-----	3,972	-----	8	-----	-----
Alaska	583	-----	-----	-----	583	-----	2	-----	-----
American Samoa	-----	-----	-----	-----	-----	-----	-----	-----	-----
Canal Zone	-----	-----	-----	-----	-----	-----	-----	-----	-----
Guam	3,389	-----	-----	-----	3,389	-----	2	-----	-----
Hawaii	4,950	-----	4,950	-----	-----	-----	4	-----	-----
Puerto Rico	-----	-----	-----	-----	-----	-----	-----	-----	-----
Virgin Islands	-----	-----	-----	-----	-----	-----	-----	-----	-----

## TRAINING AND EDUCATION

Region and State	Dollar value of Federal funds obligated (by fiscal year appropriation)					Selected items ap- proved	
	Total	1956/57	1955/56	1954	1953 and 1952	Courses given	Persons trained
Total	6,184,093	413,992	603,129	573,494	4,503,478	755	73,952
Region 1	1,880,128	227,184	142,684	122,824	1,387,436	49	14,553
Connecticut	104,909	9,752	28,679	4,111	62,367	18	809
Maine	35,538	5,442	3,637	1,376	25,083	8	259
Massachusetts	189,869	13,515	30,264	5,147	140,943	-----	-----
New Hampshire	21,102	3,671	1,591	1,776	14,064	-----	-----
New Jersey	176,769	13,960	38,620	23,818	100,371	2	150
New York	1,320,788	177,440	36,568	85,595	1,021,185	21	13,335
Rhode Island	14,384	356	427	376	13,255	-----	-----
Vermont	16,769	3,048	2,898	625	10,198	-----	-----
Region 2	1,102,540	75,992	173,847	76,685	776,013	439	30,820
Delaware	47,378	2,379	13,699	383	30,917	4	3,385
District of Columbia	241	-----	-----	-----	241	-----	-----
Kentucky	13,042	-----	275	-----	12,767	-----	-----
Maryland	162,459	4,401	6,488	1,506	150,064	66	1,225
Ohio	396,695	15,244	43,665	38,972	298,814	321	18,107
Pennsylvania	407,379	49,214	104,795	30,663	222,707	48	8,103
Virginia	73,797	4,754	4,925	4,592	59,526	-----	-----
West Virginia	1,549	-----	-----	572	977	-----	-----
Region 3	336,777	13,613	99,775	73,208	150,181	48	2,740
Alabama	102,930	594	25,790	39,414	37,132	-----	-----
Florida	74,583	8,656	39,022	2,059	24,846	48	2,740
Georgia	61,382	2,469	25,574	22,406	10,933	-----	-----
Mississippi	2,500	-----	2,010	-----	490	-----	-----
North Carolina	5,386	-----	72	3,826	1,488	-----	-----
South Carolina	9,043	-----	-----	-----	9,043	-----	-----
Tennessee	80,953	1,894	7,307	5,503	66,249	-----	-----
Region 4	445,920	10,467	35,615	71,064	328,774	38	10,167
Illinois	47,896	1,821	5,508	18,969	21,598	15	614
Indiana	56,367	718	7,768	925	46,966	8	900
Michigan	217,403	3,769	10,082	8,977	194,575	3	416
Missouri	50,150	3,554	3,558	21,355	21,683	6	1,882
Wisconsin	74,104	605	8,709	20,838	43,952	6	6,345
Region 5	267,529	60,311	75,937	49,877	81,404	76	3,458
Arkansas	12,257	2,420	9,073	-----	764	-----	-----
Louisiana	64,063	8,047	8,940	2,855	43,621	-----	-----
New Mexico	-----	-----	-----	-----	-----	-----	-----
Oklahoma	118,560	41,909	48,352	25,309	2,900	24	1,363
Texas	72,649	7,335	9,572	21,623	34,119	52	2,095



### TRAINING AND EDUCATION—Continued

Region and State	Dollar value of Federal funds obligated (by fiscal year appropriation)					Selected items approved	
	Total	1956/57	1955/56	1954	1953 and 1952	Courses given	Persons trained
Region 6.....	297, 161	12, 148	10, 720	24, 659	249, 634	25	2, 583
Colorado.....	33, 849		609	1, 917	31, 323		
Iowa.....	15, 054			501	14, 553		
Kansas.....	100, 476	485	2, 746	11, 186	86, 059		
Minnesota.....	79, 696	1, 204	4, 344	7, 576	66, 472	17	1, 793
Nebraska.....	42, 157	10, 091	2, 361	3, 251	26, 454	1	40
North Dakota.....	20, 758	255			20, 503		
South Dakota.....	780				780		
Wyoming.....	4, 491	113	660	228	3, 490	7	750
Region 7.....	1, 686, 479	13, 069	151, 807	150, 517	1, 370, 486	70	9, 581
Arizona.....	29, 711		4, 741	2, 426	22, 544		
California.....	1, 388, 253	12, 125	92, 835	110, 748	1, 172, 545	75	9, 191
Idaho.....	386	100		286			
Montana.....	1, 492	101	108	212	1, 071		
Nevada.....	17, 617				17, 617		
Oregon.....	87, 225		20, 965	13, 785	52, 475		
Utah.....	28, 686	462	2, 482	3, 438	22, 304	3	80
Washington.....	133, 109	881	30, 676	19, 622	81, 930	1	300
Territories and possessions.....	167, 559	608	2, 744	4, 657	159, 550	1	60
Alaska.....	28, 478		132	3, 421	24, 025		
American Samoa.....							
Canal Zone.....	77			77			
Guam.....	6, 343		559		5, 784		
Hawaii.....	58, 038		1, 638	831	55, 569		
Puerto Rico.....	73, 161	142		328	72, 691		
Virgin Islands.....	1, 462	466	415		581	1	60

## WELFARE SERVICE

[illegible]



**WELFARE SERVICE—Continued**[illegible]



## OTHER SERVICES

Region and State	Dollar value of Federal funds obligated (by fiscal year ap- propriation)				
	Total	1956/57 <sup>1</sup>	1955/56 <sup>1</sup>	1954 <sup>1</sup>	1953 <sup>1</sup>
Total.....	179,165	20,451	11,191	6,379	141,144
Region 1.....	66,236	451	7,574		58,211
Connecticut.....	7,025	451	6,574		
Maine.....					
Massachusetts.....					
New Hampshire.....	1,000		1,000		
New Jersey.....					
New York.....	58,211				58,211
Rhode Island.....					
Vermont.....					
Region 2.....	24,013				24,013
Delaware.....					
District of Columbia.....					
Kentucky.....					
Maryland.....					
Ohio.....	24,013				24,013
Pennsylvania.....					
Virginia.....					
West Virginia.....					
Region 3.....	1,750		1,750		
Alabama.....					
Florida.....					
Georgia.....	1,750		1,750		
Mississippi.....					
North Carolina.....					
South Carolina.....					
Tennessee.....					
Region 4.....	26,279			6,379	19,900
Illinois.....					
Indiana.....					
Michigan.....	11,967				11,967
Missouri.....	14,312			6,379	7,933
Wisconsin.....					
Region 5.....	118		118		
Arkansas.....					
Louisiana.....	118		118		
New Mexico.....					
Oklahoma.....					
Texas.....					
Region 6.....	1,892		1,402		490
Colorado.....	1,402		1,402		
Iowa.....					
Kansas.....	490				490
Minnesota.....					
Nebraska.....					
North Dakota.....					
South Dakota.....					
Wyoming.....					
Region 7.....	58,877	20,000	347		38,530
Arizona.....	121				121
California.....	58,037	20,000			38,037
Idaho.....					
Montana.....					
Nevada.....					
Oregon.....	521		347		174
Utah.....	198				198
Washington.....					
Territories and possessions.....					
Alaska.....					
American Samoa.....					
Canal Zone.....					
Guam.....					
Hawaii.....					
Puerto Rico.....					
Virgin Islands.....					

<sup>1</sup> These funds were principally for police items in 1953, engineering items in 1954, and evacuation studies in 1955/56 and 1956/57.



## STATE CIVIL DEFENSE COUNCILS AND ADVISORY COMMITTEES

There are several national groups which help to shape civil defense planning and policy, such as:

(1) The National Civil Defense Advisory Council appointed by the President in accordance with Public Law 920, 81st Congress.

(2) The Civil Defense Coordinating Board created by Executive Order 10,611 in May 1955, with representatives from 17 major Federal agencies to assist in developing a civil defense plan for all Federal departments and agencies.

(3) The Civil Defense Scientific Advisory Committee created in 1954 under authority of section 102 (b), Public Law 920, 81st Congress, to assist FCDA in major scientific problems affecting civil defense.

(4) The National Advisory Council for Rural Civil Defense established in December 1955 by the FCDA Administrator.

Just as Civil Defense Advisory Councils and Committees are needed at the national level, so the need for such groups has been recognized by the States. All except eight States have a Civil Defense Council or Advisory Committee, or both. They are by States:

### STATE CIVIL DEFENSE COUNCILS AND ADVISORY COMMITTEES

Region and State	States having a civil defense council or advisory committee	Type		Region and State	States having a civil defense council or advisory committee	Type	
		Council	Committee			Council	Committee
<b>Region 1:</b>				<b>Region 4:</b>			
Connecticut.....	X	X		Illinois.....	X	(3)	(3)
Maine.....	X	X		Indiana.....	X	(3)	(3)
Massachusetts.....	X	X		Michigan.....	X	(3)	(3)
New Hampshire.....	X	X		Missouri.....			
New Jersey.....	X	X		Wisconsin.....	X	(2)	(2)
New York.....	X	X		<b>Region 5:</b>			
Rhode Island.....	X	X		Arkansas.....	X	X	
Vermont.....	X	X		Louisiana.....			
<b>Region 2:</b>				New Mexico.....	X	X	
Delaware.....	X		X	Oklahoma.....	X	X	
District of Columbia	X	1 X		Texas.....	X	X	
Kentucky.....				<b>Region 6:</b>			
Maryland.....				Colorado.....	X	(3)	(3)
Ohio.....	X		2 X	Iowa.....	5 X		
Pennsylvania.....	X	X		Kansas.....	X	X	
Virginia.....	X		X	Minnesota.....	X	X	
West Virginia.....				Nebraska.....			
<b>Region 3:</b>				North Dakota.....	X	X	
Alabama.....	X	(3)	(3)	South Dakota.....	X	X	
Florida.....	X	4 X		Wyoming.....	X	X	
Georgia.....	X	(3)	(3)	<b>Region 7:</b>			
Mississippi.....	X	(3)	(3)	Arizona.....	X	(3)	(3)
North Carolina.....	X	(3)	(3)	California.....	X	X	Nine
South Carolina.....				Idaho.....	X	X	
Tennessee.....				Montana.....	X	(3)	(3)
				Nevada.....	X	(3)	(3)
				Oregon.....	X	X	Six
				Utah.....	X	X	X
				Washington.....	X	X	Nine

1 Citizens. 2 Executive. 3 Not reported. 4 Governor's cabinet. 5 State development commission.



## CIVIL DEFENSE PERSONNEL

The tables that follow show summaries of the number of persons currently enrolled in civil defense as reported by the District of Columbia and 42 of the 48 States. The figures include those persons who are actively enrolled in civil defense and who have been notified of their civil defense assignments—paid or volunteer, full or part-time personnel. FCDA has been unable to obtain data on this subject from six States.

The tables reflect personnel status as of June 30, 1956, but due to differences in reporting systems, the figures for seven States cover a period ranging from December 31, 1955, to August 1956. The figures from many States represent their best available estimates rather than actual counts. They should therefore be used as estimates only and with some caution.

### NUMBER OF PERSONS ENROLLED IN CIVIL DEFENSE By State

Region and State	Number of persons enrolled	Region and State	Number of persons enrolled
Total.....	<sup>1</sup> (4, 471, 073)	Region 5.....	383, 659
Region 1.....	<sup>1</sup> (1, 446, 153)	Arkansas.....	45, 707
Connecticut.....	89, 065	Louisiana.....	94, 906
Maine.....	72, 960	New Mexico.....	12, 732
Massachusetts.....	195, 105	Oklahoma.....	87, 055
New Hampshire.....	28, 386	Texas.....	143, 259
New Jersey.....	267, 620	Region 6.....	350, 533
New York.....	756, 088	Colorado.....	53, 514
Rhode Island.....	36, 929	Iowa.....	49, 086
Vermont.....	NR	Kansas.....	44, 950
Region 2.....	908, 038	Minnesota.....	70, 551
Delaware.....	7, 707	Nebraska.....	53, 895
District of Columbia.....	57, 241	North Dakota.....	22, 496
Kentucky.....	15, 969	South Dakota.....	43, 826
Maryland.....	55, 715	Wyoming.....	12, 215
Ohio.....	202, 059	Region 7.....	<sup>1</sup> (702, 537)
Pennsylvania.....	465, 940	Arizona.....	NR
Virginia.....	55, 129	California.....	494, 168
West Virginia.....	48, 278	Idaho.....	NR
Region 3.....	323, 056	Montana.....	23, 589
Alabama.....	21, 491	Nevada.....	7, 197
Florida.....	73, 282	Oregon.....	41, 588
Georgia.....	55, 431	Utah.....	14, 918
Mississippi.....	12, 217	Washington.....	121, 077
North Carolina.....	85, 987		
South Carolina.....	14, 128		
Tennessee.....	60, 520		
Region 4.....	<sup>1</sup> (357, 097)		
Illinois.....	259, 815		
Indiana.....	97, 282		
Michigan.....	NR		
Missouri.....	NR		
Wisconsin.....	NR		

<sup>1</sup> Incomplete.

NR—No Report.



## NUMBER OF PERSONS ENROLLED IN CIVIL DEFENSE By Program

Service or program	Number of persons enrolled	Service or program	Number of persons enrolled
Total.....	1 4, 471, 073	Police—regular and auxiliary.....	420, 205
Administrative and staff—executive, services, clerical.....	79, 608	Public information—officers and staff.....	5, 383
Communications and warning—control center personnel, radio operators, etc.....	181, 851	Radiological defense.....	22, 818
Emergency welfare—registration, feeding, etc.....	379, 890	Rescue—light and heavy duty, industrial, etc.....	105, 434
Engineering—facilities, traffic, etc.....	395, 530	Supply.....	22, 339
Fire—regular, volunteer, auxiliary.....	563, 720	Training and education—including training officers, but NOT including those counted in other services listed above or below.....	36, 620
Ground observer corps.....	433, 134	Transportation.....	473, 653
Health and medical—including first aid trainees.....	772, 828	Warden.....	392, 652
		Other.....	176, 408

<sup>1</sup> This total is for the District of Columbia and 42 of the 48 States.

## INTERSTATE CIVIL DEFENSE AND DISASTER COMPACTS

The Federal Civil Defense Act of 1950, as amended (subsec. 201 (g)), authorizes the Administrator to encourage, and to assist in, the negotiation of civil defense compacts between States and to review the terms and conditions to obtain uniformity in them and consistency with national civil defense plans and programs, where feasible. The Administrator is also authorized to assist and coordinate activities under such compacts. The act establishes congressional procedure for the granting of the consent of Congress to civil defense compacts.

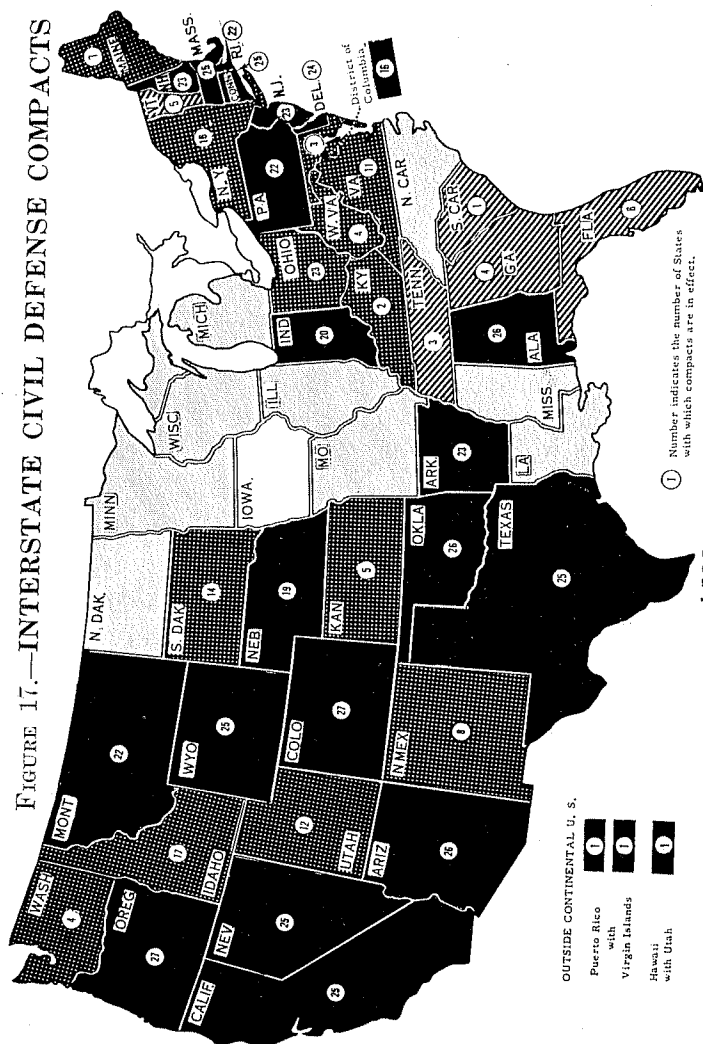
Such a device as the interstate compact was considered necessary by the Congress to avoid Federal centralization of civil defense operations and at the same time to avoid excessive decentralization which might result if each State could operate in civil defense matters only as a separate entity. The interstate compact provides a broad base of legal authority for joint civil defense action by two or more States.

A model compact which was developed by the Office of Civil Defense of the National Security Resources Board in conjunction with representatives of the Council of State Governments has been followed by the States in executing civil defense agreements. There have been no substantial changes in its terms except in several of the Southeastern States, which have executed compacts which do not contain authority for interstate operations in natural disasters. Vermont is the only other State which deviates from the model in this manner. Some of the Ohio compacts contain a substantial deviation in article 3 in the rights, privileges, and immunities clause. However, all except a few of the Ohio compacts have now been brought into line with the model by amendment of this article.

The compacts authorize supplementary agreements which are effective without being submitted to the Congress. Working agree-



FIGURE 17.—INTERSTATE CIVIL DEFENSE COMPACTS



## LEGEND

20 States plus D.C., the Virgin Islands and Puerto Rico have Model Compacts and have offered to compact with all other States.—

13 States have Model Compacts but have not offered to compact with all other States.—

5 States have compacts with variations from the Model.—

38 STATES HAVE ONE OR MORE INTERSTATE CIVIL DEFENSE COMPACTS IN EFFECT AS FOLLOWS:

Note: The Kansas Attorney General has ruled that Kansas compacts are invalid.



ments, either formal or informal, have been entered into between many States under this authority. These agreements set out in detail plans of operations in the fields of the various civil defense services, such as police, medical, welfare, and others.

While considerable progress has been made by the States in effectuating interstate civil defense compacts, there are some areas of the country which have lagged in establishing this authority, as indicated in figure 17. In view of the survival plan program which FCDA has initiated, it is especially important that all States establish the necessary basic legal framework for operating across State boundaries.

Thirty-eight States and the District of Columbia, Hawaii, the Virgin Islands, and Puerto Rico, have at least one interstate civil defense compact in effect. The compacts of 33 of these States are in the terms of the model; however, 13 of these 33 have not offered to compact with all other States. Ten States do not have civil defense compacts, i. e., Illinois, Iowa, Louisiana, Michigan, Minnesota, Mississippi, Missouri, North Carolina, North Dakota, and Wisconsin. Only one State in this group (Iowa) has no statutory authority to enter into such compacts.

Of the 38 States, 5 (Alabama, Arizona, Colorado, Oklahoma, and Oregon) have compacts with more than 25 other States; 17 have compacts with from 16 to 25 others; 7 have compacts with from 6 to 15 others; 9 have compacts with from 1 to 5 others.

All of the States have not followed the same method of either authorizing or effectuating compacts. Some of the State legislatures have conferred general authority upon the Governor to enter into civil defense compacts with other States; others have authorized the Governor to enter into interstate civil defense compacts in terms set out in a special Compact Act. A majority of the States have followed the procedures for effectuating compacts set out in FCDA Advisory Bulletin No. 32 and Supplement No. 1 thereto. Some have followed different methods of consummation, usually by executing a separate instrument with each State and forwarding a copy of each such instrument to Congress.

## **WORKMEN'S COMPENSATION FOR CD PERSONNEL**

Thirty-six States have adopted legislation providing for compensation to special categories of, or all, civil defense workers who may be injured while in training or on duty or under other specified conditions. In four States (California, New York, Ohio, and Rhode Island) this has been done by amendment to the State Workmen's Compensation Law, while in the remaining States which have enacted this type of legislation it has been done by the State Civil Defense Act or amendments thereto.



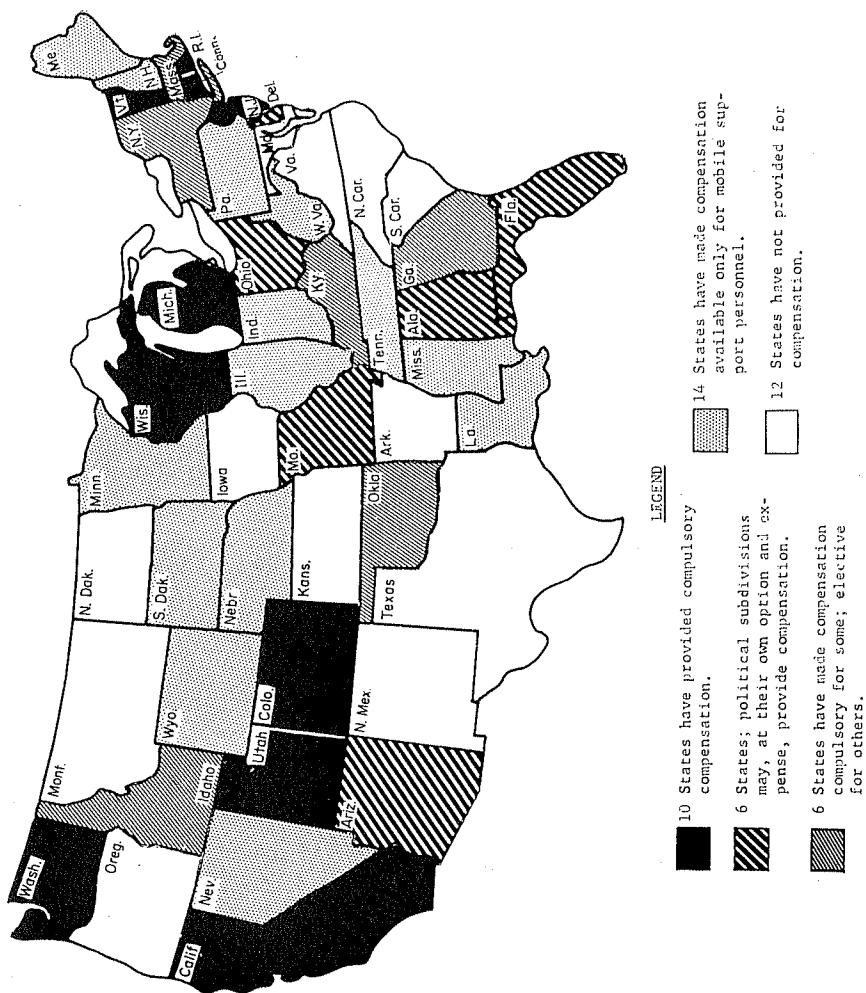


Figure 18.—Workmen's compensation by States.



In 12 States (California, Colorado, Connecticut, Maine, Massachusetts, Michigan, New Jersey, New York, Ohio, Rhode Island, Washington, and Wisconsin) either compulsory or elective coverage is provided for all types of civil defense workers and for periods while in training, practice, or on duty. The other States have limited coverage to specified civil defense workers, such as members of mobile support units or those rendering aid outside of their own political subdivisions, or police and rescue personnel. In some States coverage is also limited to injuries received during attack or while on actual duty or while performing specified services.

Under most of the provisions the covered volunteer civil defense workers are classified as employees of the State or given the same rights as State employees for purposes of the Workmen's Compensation Law. In some States they are classified as employees of the sponsoring local political subdivision.

In general, benefits under the State Workmen's Compensation Law are applied to civil defense workers who are covered. In California and New York, where coverage for special workers is provided by amendment to Workmen's Compensation Laws, the benefits are less in some respects for these workers than for others. In Massachusetts, where coverage has been included in the State Civil Defense Act, benefits for civil defense workers are greater in some respects than those for regularly covered workers. New Jersey has a special benefit system for civil defense workers.

Civil defense workers who are on a paid basis generally are subject to the same protection for injuries while on duty as other public employees who are on a paid basis. Figure 19 summarizes the main provisions of laws relating to workmen's compensation for civil defense personnel.

## **AMERICAN NATIONAL RED CROSS COOPERATION**

The American National Red Cross participation in the national civil defense program expanded during the year following a series of conferences between officials of FCDA and the Red Cross and an exchange of letters between the Administrator and the president of the Red Cross.

To effect a closer working relationship, the Red Cross created the position of assistant to the president on civil defense affairs in its national headquarters, and arranged for a full time liaison officer at FCDA National Headquarters. In addition, Red Cross representatives for liaison and program planning were detailed to each of FCDA's seven regional offices, some on loan, others continuing in the employ of the Red Cross. FCDA, in turn, added new members to its welfare staff to work with the Red Cross.



Figure 19.—COVERAGE OF CIVIL DEFENSE PERSONNEL

State	Compensation Provided by		Benefits for All State Civil Defense Personnel		Benefits for All Political Subdivision CD Personnel		Benefits for Mobile Support Personnel		Benefits Available While Training	Rehabilitation Aid Provided
	Amendment to Workmen's Compensation Act	State Civil Defense Act	Compulsory	Elective	Compulsory	Elective	Compulsory	Elective		
Alabama						g.		g.	i.	i.
Arizona						g.		g.	i.	i.
California										i.
Colorado		a.								i.
Connecticut										i.
Delaware						g.		g.	i.	i.
Florida						g.		g.	i.	i.
Georgia									j.	i.
Idaho							l.		j.	i.
Illinois									g.	i.
Indiana							g.		g.	i.
Kentucky									k.	i.
Louisiana										i.
Maine										i.
Massachusetts			b.	b.	b.	b.	b.	b.	i.	i.
Michigan							i.		i.	i.
Minnesota							g.		g.	
Mississippi										
Missouri						g.		g.	i.	i.
Nebraska							g.		g.	i.
Nevada									i.	i.
New Jersey		a.								i.
New Hampshire									k.	i.
New York			c.	c.	c.	c.	c.	c.	c.	c.
Ohio									k.	
Oklahoma			d.						d.	i.
Pennsylvania										i.
Rhode Island										
South Dakota							g.		g.	i.
Tennessee								g.	g.	i.
Utah										
Vermont			e.		e.		e.		e.	i.
Washington										i.
West Virginia									i.	i.
Wisconsin			f.		f.		f.			
Wyoming										i.

a. By special legislation.

b. Compulsory for volunteer unpaid firemen and policemen; elective for other volunteer unpaid personnel.

c. Compulsory for certain civil defense personnel; elective for others.

d. Compulsory for firemen and policemen performing civil defense activities; no benefits for others.

e. Only to the extent as provided for sheriffs, constables and local

h. Compulsory for State, county and city personnel; elective for town personnel.

i. No specific provision

j. Compulsory for mobile support personnel; elective for political subdivision personnel.

k. Elective.

l. Compulsory for State personnel; elective for political subdivision



In late 1955, FCDA and the Red Cross cooperated in relief work in a number of natural disasters, particularly the floods on the west and east coasts. During these operations both agencies were able to clarify their respective responsibilities and familiarize one another with policies and procedures.

At the request of FCDA, the Red Cross has helped to improve and speed civil defense training in first aid, home nursing, and emergency feeding. During fiscal year 1956 the Red Cross awarded 852,000 first aid certificates and 216,800 home nursing certificates.

During the year the Red Cross began work on a new standard first aid course which will include techniques for the treatment of illness and injury resulting from enemy attack. The new course will be the first aid training course for civil defense workers and the general public, and will be publicized jointly by FCDA and Red Cross.

Recognizing Red Cross experience in training canteen workers, FCDA requested help in preparing an emergency mass feeding course for civil defense uses. FCDA will use this course to train civil defense workers for enemy-caused emergencies; the Red Cross in training volunteers for mass feeding operations in natural disasters. Two pilot courses to test the soundness of course material were scheduled for midsummer.

With the advice and counsel of leaders in nursing, the Red Cross is preparing a new training course on care of the sick and injured for all civil defense auxiliary personnel working in medical care facilities.

Plans assigning to the Red Cross development of a national system for procurement of whole blood were completed by FCDA. In civil defense emergencies the Red Cross will direct the plan, under the supervision of the FCDA health office.

## INTERNATIONAL COOPERATION

As one of the elements in the total program of national security, which includes defense alliances with friendly foreign nations, FCDA, under Public Law 920, has the authority to work closely with allied nations in developing civil defense systems.

FCDA is required, with the advice and guidance of the Department of State, to take part in deliberations of international civil defense and security organizations and exchange civil defense information with other free world nations.

A summary of the major activities and developments in civil defense international cooperation during the fiscal year follows.

### North Atlantic Treaty Organization

In 1955, the North Atlantic Council, recognizing the need for a comprehensive survey and coordination of all phases of civil emer-



gency planning, created the Senior Civil Emergency Planning Committee.

The function of this committee is to advise the Council on civil emergency planning, and to provide guidance to all groups engaged in planning. The senior committee held two meetings during fiscal 1956. The meeting held in April 1956 was attended by the FCDA Administrator.

FCDA also serves on an interagency committee which was founded during the year to formulate policies for and provide guidance to the United States delegate to the Senior Civil Emergency Planning Committee. This committee is composed of representatives of the Departments of State and Defense, the International Cooperation Administration, and the Office of Defense Mobilization.

The NATO Civil Defense Committee, created in 1952, and composed of the civil defense directors of the NATO member nations, continued to concern itself during the year with the development of civil defense programs. This included promoting free exchange of civil defense information, developing civil defense agreements between nations, standardizing civil defense equipment and training, and furthering mutual support on an international basis.

This committee also established working groups to study technical problems involved in fire fighting, shelter, scientific matters, warning systems, mobile support columns, and the maintenance of public utilities.

The NATO Civil Defense Committee held two meetings during the year. The Administrator and his special advisor attended the meeting held in November 1955.

At the request of the Department of State, FCDA also sent representatives to a number of meetings of NATO working parties established by the Civil Defense Committee, including the working parties on firefighting, shelters, public utilities (gas, water, and electricity), and the scientific working party.

An FCDA representative will attend all future meetings of the working party on warnings.

In 1954, the North Atlantic Council created a medical committee to plan assessment of casualties, and to study stockpiling of medical material, export and import requirements, and war hospitalization facilities. This committee held two meetings which were attended by representatives of several United States Government agencies, including FCDA.

In view of its direct concern with many of the problems currently being considered by the medical committee, FCDA has been asked by the Department of State to continue its participation in the committee work, and to provide the United States representation for the meeting scheduled in the fall of 1956.



In November 1955, the Senior Civil Defense Advisor for NATO, Sir John Hodsoll, visited the United States to confer with the Department of State on the coordination of NATO civil emergency planning. At the invitation of FCDA, he addressed meetings of the National Association of State Civil Defense Directors and the FCDA National Women's Advisory Committee.

## Canada

Joint Canadian and United States civil defense matters are handled through the Joint United States-Canada Civil Defense Committee established on March 27, 1951. It was agreed then that, so far as possible, joint civil defense activities should be coordinated as if there were no border. The committee provides a nondiplomatic channel for communications, and enjoins the respective countries to provide a full and free flow of civil defense information to each other. It also authorizes direct cooperation between States and Provinces, and between border municipalities.

United States members include representatives of the Departments of Justice, State, and Treasury, in addition to the Federal Civil Defense Administrator and members of his staff. Canadian representatives are the Minister of the National Department of Health and Welfare, and his deputy, the Federal Coordinator, and officials of the Department of External Affairs, and the Canadian Joint Staff.

Day-to-day business of the committee is conducted through the joint secretariat and joint working groups set up to handle specific technical and professional problems.

Operating agreements have been made on most essential matters, and the current business of the committee is primarily coordination and consultation on problems of civil defense and their solution.

The full committee met in July 1955. The next meeting was set for October 18-19, 1956.

Canadian and United States civil defense staff colleges exchanged students and course material during the year. Conferences on a wide variety of subjects were attended by representatives from each country. Technical and professional papers of each country were submitted, when possible, for review by the staff of the other country, before publication.

Arrangements were completed for the loan of a 200-bed civil defense emergency hospital unit to Canada for training in casualty care. Other arrangements were made to make available to Canada certain items of chemical and biological warfare defense for study.



## Cooperation With Other Friendly Nations

During the fiscal year, FCDA broadened its program of exchanging information on civil defense with other friendly nations. FCDA's Staff College training facilities were made available to civil defense officers from other countries, including China (Formosa), Canada, Chile, Denmark, Egypt, Pakistan, Sweden, and Venezuela.

Basic information on the FCDA civil defense organization, unclassified results of the atomic test program, and many FCDA films and publications were furnished upon request to: Australia, Belgium, Brazil, Canada, Chile, Denmark, Egypt, Ecuador, France, (West) Germany, Great Britain, Honduras, India, Iran, Ireland, Italy, Japan, Lebanon, Malta, The Netherlands, Norway, Pakistan, Peru, the Philippines, Portugal, South Africa, Spain, Sweden, Switzerland, Uruguay, and Venezuela.

FCDA also established a program with friendly nations to exchange civil defense equipment for comparative testing.

The FCDA staff provided technical help and guidance to the civil defense director of Pakistan in preparing his country's national civil defense plan.

FCDA arranged for the civil defense directors of Denmark and Bombay, India, to visit several States and cities to study State and local civil defense organizations and operations.

During the year, the Commandant of the Australian Civil Defense School, the Civil Defense Director of the Australian State of New South Wales, a member of the Civil Defense Advisory Commission of Chile, the Civil Defense Directors of Denmark and Bombay, India, representatives of the Governments of China (Formosa), Egypt, Great Britain, and South Africa visited FCDA to study United States evacuation plans and the national civil defense program. All were given briefings on defense problems raised by thermonuclear weapons and FCDA measures devised to protect United States citizens against nuclear weapons and natural disasters.

In April 1956, Mr. R. C. Chilver, deputy secretary, Cabinet Office of the United Kingdom, visited the United States to discuss civil emergency planning with officials of the Department of State, the Office of Defense Mobilization, and FCDA. At the invitation of FCDA, Mr. Chilver addressed the annual meeting of the National Association of State and Territorial Civil Defense Directors.

## Visits by FCDA Officials Abroad

FCDA officials attending NATO working party meetings in Europe during the year reviewed civil defense developments and conferred with officials in Belgium, France, Great Britain, and Sweden.

The Administrator inspected the national civil defense organiza-



tions of Denmark, The Netherlands, Sweden, and the United Kingdom, and met with civil defense and other government officials in those countries. The Special Advisor to the Administrator inspected civil defense in Denmark, Norway, Portugal, and Sweden. These visits and studies developed the following conclusions:

Many European countries are taking a new look at their civil defense plans and are revising them in light of nuclear warfare. Better balance between shelter and evacuation is being sought because of the danger of radioactive fallout from thermonuclear weapons.

Small European countries with little room for tactical or permanent dispersal are stressing deep public shelters as a major protection device.

There was a notable increase in the tendency of some countries to train specific civil defense forces, these to be organized as mobile columns or independent civil defense corps available exclusively for civil defense emergency duty.

In smaller countries, need for highly trained, well organized forces under control of the central government to back up local volunteer civil defense elements in areas of greatest need was indicated.

Great Britain devoted a great deal of study and conducted one exercise to test military support of civil authorities in event of nuclear attack.

Public participation in and governmental support of civil defense in many Western European countries are ahead of the United States.

Populations of several European countries voluntarily voted themselves a civil defense obligation under law, making it mandatory on everyone between the ages of 16 and 65 to take a prescribed number of hours of civil defense training each year.